STATUTORY ENQUIRY—1926

STEEL INDUSTRY

VOLUME IV

The Written and Oral Evidence given by the Engineering, wagon building and skilled firms before the Indian Tariff Board.

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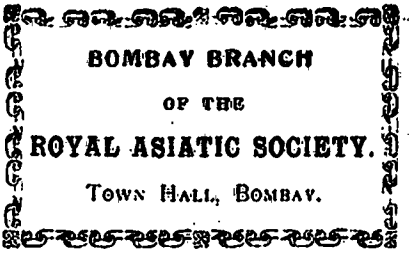

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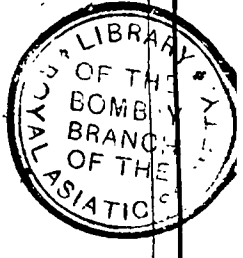

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I.—Questionnaire issued to the railway wagons, locomotive and carriage underframe builders.

(Questions having reference to locomotives are intended to be answered by the Peninsular Locomotive Company only.)

1. Please give a list of the principal steel castings required for the construction of locomotives, carriages and wagons respectively. Does the following list of castings which the Hukumchand Electric Steel Works Company claim to be in a position to be able to manufacture out of scrap steel include all these classes?

(*a*) *Locomotive.*—Axle Boxes, Buffers, Bogie Frame Stays Motion Plates, Distance Pieces, Piston Valve Heads, Wheel centres, Horn blocks, etc.

(*b*) *Carriage and wagon.*—Axle Boxes, Buffers, Bogie Centre Brackets, Queen posts, Top Bolster Spring Bearings, Bottom Side Bearers, Sleeve Washers, Spring Sleeves, Spring Caps, Top and Bottom side Bearers.

2. Have any of these classes of castings been standardized so as to permit of their use in more than one type of locomotive, carriage or wagon?

3. In your opinion, is there any inherent difficulty involved in the process of manufacture or in obtaining raw material which would prevent the economic production in India of (*a*) these classes of castings and (*b*) spring steel.

4. Kindly state the total weight of (*i*) the principal classes of steel castings and (*ii*) spring steel required by you for the construction of a typical locomotive, carriage and wagon respectively.

5. Please state the total weight of (*a*) the principal classes of steel castings and (*b*) spring steel used by you since 1922-23 onwards under the following heads:—

(*a*) Imported as such.
(*b*) Manufactured in India.

6. Please state the price per cwt. paid for (*i*) each of the principal classes of steel castings and (*ii*) spring steel falling under headings (*a*) and (*b*) in question 5 for each year from 1922-23 onwards.

***N.B.*—1. For castings and spring steel imported from the Continent, please distinguish the country of origin.**

2. For both British and Continental castings and spring steel, please state where possible the sterling f.o.b. prices and the charges for freight, landing, etc., separately. If this is not possible, please state the c.i.f. price in sterling.

7. (*a*) Do you contemplate the installation of plant which would enable you to manufacture the steel castings necessary for the construction of locomotives, carriages and wagons?

(*b*) If you are manufacturing any castings whether steel or iron in your workshop, please give the percentage of rejected castings.

8. If you have any experience of (*i*) steel castings, (*ii*) spring steel manufactured in India, please state the names of the makers and give your views in regard to the quality and workmanship compared with those of the imported article.

9. The Hukumchand Electric Steel Works in referring to the Indian wagon builders state in their representation:—

> "With one trifling exception we have not been asked even to quote for the castings required to be incorporated in these wagons. For the wagons alone 12,800 complete cast steel axle boxes had either to be imported or manufactured in this country. No orders and no enquiries for these axle boxes have come in our way."

Please state whether this is a correct statement and if it is your reasons for not asking for any quotations from, and for not placing any orders with, the Hukumchand Electric Steel Works Company.

II.—Telegram from the Tariff Board, dated the 12th May, 1926, to the Peninsular Locomotive Company, Limited, Messrs. Burn and Company, Limited, The Indian Standard Wagon Company, Limited, and Messrs. Jessop and Company, Limited.

Please send c.i.f. prices imported axle boxes and other railway castings used by you during last three years and also if you have purchased locally manufactured castings furnish prices paid.

III.—Letter from the Tariff Board, to Messrs. Burn and Company, The Indian Standard Wagon Company, Limited, Messrs. Jessop & Company, Limited, and the Peninsular Locomotive Company, dated the 25th May 1926.

I am directed to state that in view of the proposals put forward by wagon builders in their recent representations, for the imposition of duties on imported wagons and carriage underframes, in lieu of the payment of bounties, it is essential that the Tariff Board should be furnished with the fullest possible information in regard to your costs. It would be convenient if this were supplied in respect of—

(*a*) wagons

(*b*) underframes

both broad gauge and metre gauge and in the manner indicated below which is based on the lines followed by the Board in Chapter V of their First Report on steel in dealing with the costs of producing steel at Jamshedpur. It will be seen from that Chapter that the costs of production fall under the three main heads:—

I. Works costs.

II. Overhead charges.

III. Manufacturer's profit.

The information required in regard to the first two of these is shown in detail below.

I. *Works costs.*

These which include all costs incurred at the works in the process of manufacture should be shewn as follows:—

Type and description of $\frac{\text{wagon}}{\text{underframe}}$ *broad gauge and metre gauge.*

	Weight.	Rate.	Value.
1. Materials, *e.g.*—			
Indian steel			
Imported British			
Imported Continental . . .			
Castings—Indian . . .			
Imported British . . .			
Imported Continental . . .			
Fittings			
Other materials			
Stores, etc			

N.B.—Materials supplied by Railways, *e.g.*, wheels, axles, etc., should not be included.

2. Cost above materials—			
Power			
Fuel			
Labour			
Repairs			
General works—supervision—			
(*a*) European . . .			
(*b*) Indian			
Nett cost per unit of output .			
Total number of units in the year of each type . .			

The information in regard to works costs should be supplied for each official year from 1922-23 up to March 1926. If the figures cannot conveniently be given for the official year, the calendar year may be used. Copies of your cost sheets in the form in which you keep them may be supplied for each year or half year as the case may be.

II. *Overhead charges.*

These should be sub-divided as follows:—

(*a*) Depreciation.

(*b*) Interest on working capital.

(*c*) Head Office charges.

(*a*) *Depreciation.*

(*i*) In order to ascertain this, it is necessary that the block value should be fixed. This should be shewn in the following form which would give the amount spent each year since the establishment of the works up to date.

Year.	Land.	Buildings.	Plant and machinery	Miscellaneous.	TOTAL.

(*ii*) The amount of depreciation actually written down year by year, and the rate at which it was calculated should be stated. If the amount written off as depreciation is greater or less than that which you consider reasonable for buildings or plant of this type, the rate which you consider reasonable in normal conditions should be stated.

(*iii*) The replacement value at the present ruling prices for the whole block should, if possible, be stated under the above headings.

(*b*) The amount of working capital actually employed should be clearly stated together with the rate of interest which is being paid on it. If the working capital is less than you consider necessary, the amount required and the rate at which it could be procured should be stated. It is essential that the interest paid on this should be distinguished from the profit expected on the capital invested in the block.

(*c*) Head office charges include all expenditure incurred by the Head Office on supervision, management, commission, if any, on sales, etc. The expenditure incurred on each of these items should be separately stated, if possible.

III. *Manufacturer's profit.*

The amount of capital invested under various denominations, *e.g.*, Debentures, Preferen e, Ordinary shares, etc., together with the rate of interest paid or payable on debentures and preference shares, and the rate of return you consider reasonable on capital invested in works of this kind should be stated.

1. THE PENINSULAR LOCOMOTIVE COMPANY, LIMITED.

A.—WRITTEN.

(1) Representation, dated the 30th April 1926.

In connection with the Press Communiqué, dated 16th April 1926, which you were good enough to send us, we beg to apply for protection for the locomotive industry.

We regard this industry to fall under the group referred to in paragraph 3 of your circular as an industry "the claims of which to protection have already been admitted." We beg to submit, therefore, a statement only on the specific point on which the demand for protection by this industry was turned down in the enquiry of 1923.

Should the Board desire that a fuller statement be made, we shall be glad to do so. We interpret the last paragraph of your circular to mean that on the preliminary representation the Board will issue a questionnaire to us calling for detailed replies on specific issues, both general and technical. On receipt of this we shall try and send the detailed statement to you.

The Chairman of this Company is expected to be in India some time before October, and we assume that the Board will not desire oral evidence in connection with this industry till after they have dealt with the larger questions referring to the Steel Company.

Note accompanying the application for protection for the Locomotive Industry, dated 30th April 1926.

At the time of the last inquiry the Tariff Board, having gone into the policy of the Government of India, the communiqué of 1921, the origin and organisation of the Peninsular Locomotive Company, expressed themselves in the following terms:—

> "The industry in our opinion has strong claims to temporary national assistance . . . . . There is every reason to believe that the works will be under efficient control. The industry is very valuable from the national point of view. Apart from its importance as affecting the question of national defence, it is an industry which gives ample opportunities for the purpose of training Indians in mechanical engineering, and if India is to make itself independent as far as possible in the supply of its Railway requirements, it is essential that in its industrial organization it should possess a well-established locomotive industry. With regard to the supply of labour also, it is favourably situated . . . . . We consider that the establishment of the manufacture of locomotives in India is desirable both on national grounds and because of its importance to the development of the Steel industry . . . . The protection required would probably be not greater than has been found necessary for the protection of the locomotive industry in other countries such as Australia, where the import duty is 27½ per cent. *ad valorem*, and Canada, where it is 22½ per cent."

2. The Tariff Board then estimated the demand for locomotives in India and put it at a hundred locomotives for the next five years on the evidence of Mr. (now Sir) C. D. M. Hindley.

> "If the requirements during the next five years of all the railways owned by Government will not exceed 100 locomotives in any one year, it is clear that no protection, or assistance in any other form, can be recommended by us in respect of this industry . . There is no 'large market' in the sense in which that phrase was used by the Fiscal Commission."

We beg to state that if 400 locomotives for twelve years mentioned in the communiqué of 1921 were an over-estimate of Government requirements, the figure mentioned in Sir C. D. M. Hindley's evidence has proved to be an under-estimate. The annual requirements since 1920-21 have been as follows:—

——	1920-21.	1921-22.	1922-23.	1923-24.	1924-25.	1925-26.
Broad Gauge . . .	553	71	156	165	118	206
Metre Gauge . . .	316	42	78	30	44	41
TOTAL .	869	113	234	195	162	247

This gives an average of 303 locomotives purchased by Government for the last six years since 1920 as compared with 255 locomotives a year before the war.

3. These requirements have been for Government railways only, *i.e.*, for 27,160 miles out of a total of 33,270 miles. This would involve an additional demand of about 33 per cent. outside Government requirements, subject to adjustment regarding gauge and intensity.

4. There is another and a considerable item of demand to be covered by the existing locomotive factory, and, that is, spare parts. Government's policy in connection with the purchase and manufacture of spare parts for locomotives has not been clearly defined. The requirements of Government railways alone for spare parts for locomotives would keep several factories of the size of the Peninsular Locomotive Company's Works at Tatanagar going. While the Government have, therefore, been reluctant to utilise the services of the Peninsular Locomotive Company in this direction, they have not stinted on the outlay on railway workshops, the figure of such outlay during the last few years having been put at no less than Rs. 8½ crores. In an official interview with the Chief Commissioner for Railways in September 1924, it was definitely stated that railway workshops were fully equipped for all purposes of repairs of locomotives as well as for manufacturing all the spare parts required, and yet since then there have been considerable outlays in this direction. In railway circles official critics of policy have themselves complained about the duplication of workshops and the necessity of reorganization. These criticisms led to the appointment of the Railway Workshops Committee under Sir Vincent Raven. The report of this Committee has not been made available to this Company, but it is bound to throw light on the capacity of existing workshops and whether this capacity has not been increased unduly so as to trespass on the legitimate scope and activities of private enterprise.

5. Whatever may be said about repairs, the experience throughout the world points to private enterprise in manufacture always producing better results in point of quality and price than State Workshops. Even in the United Kingdom railways have returned to the practice of placing orders with locomotive factories.

6. Under these conditions, while turning down the demand for protection of a Company brought into existence by their expressed programme and promise, we understand the Railway Board have countenanced the manufacture of locomotives which is attempted and is carried out in the State Workshops at Ajmer. It is for the Tariff Board to elicit authoritative information on these activities both as to costs and quality and to take into account the full bearing of the various economic principles, which they applied to the request of this Company in 1923 and on which they turned down the demand for assistance. If accounts were kept commercially and all allowance were made for those items, for which a business firm has to pay, the costs at Ajmer

would be substantially higher than at our Works, taking into consideration the economical methods associated with private enterprise. "The heavy burden" which "the country would carry," according to paragraph 18 of the Tariff Board's report on locomotive building industry, is as much there in the activities of State workshops as in that of private enterprise.

7. Some arrangements could have been made for placing orders for locomotives or spare parts with this Company but for the inelasticity of the stores rules, by which the Railway Board is bound. These rules affect only the purchase of items required for any department of Government and the rules are so explicit that little or no discretion is left. No such rules restrict the capital outlay, in sanctioning which the Railway Board have absolute control subject to the approval of the Railway Finance Committee.

8. Another important question in connection with this matter would be the procedure of purchase. State railways managed by Companies are, we understand, co-operating more with the Railway Board for the calling of tenders for locomotives, but these tenders are not called in India in rupees for delivery in India, and the Railway Board claim that they can only recommend the acceptance of certain tenders to the Boards of Company-managed railways. In the absence of express provision modifying application of stores rules to locomotives and spare parts purchase, no results would be secured by negotiations of this Company with the Railway Board, whose powers appear to be unduly restricted by these rules. We think that absolute and final discretion should be left with the Railway Board, a great Department of the Government of India, who could be trusted to take a long view of things without any sacrifice of essential economy.

9. Considerable progress has been made with regard to the standardisation of types, a difficulty which also weighed with the Tariff Board in their decision in their first report in 1924. Full particulars of this also, we trust, the Tariff Board will be able to secure from the Railway Board. The latest tenders, which are being called in London, are, we understand, for 89 standard locomotives.

10. The situation of this Company has materially altered since the compromise effected with the Government of India, by which the Railway Board were pleased to place an order with this Company for five hundred wagons at the lowest tendered Indian price without bounty. The Company undertook on their side to put up all the necessary additional plant especially required for wagon building. This has been already done at a considerable outlay and the Company is turning out wagons at an increasing rate, the output for the current month being seventy-two wagons. The lay out of the Works is, however, as a locomotive factory and a very large part of the plant put down for locomotives has been lying idle for all these years. The Company has suffered considerable loss in standing charges and interest during the interval. The position now is that a certain amount of overhead charges as well as depreciation charges for machinery and buildings are covered by the wagon activity of the Company. If locomotives are, therefore, manufactured, this activity would have to bear only a portion of the overhead charges according to the turnover and a portion only of the depreciation, interest and other charges. What was, therefore, not possible in 1921 or at any later time, including 1924 at the time of the first Tariff Board enquiry, has now become possible. If the Peninsular Locomotive Company received a small order for locomotives, there would be no danger now of the amount of protection or other initial encouragement given to this Company being unduly heavy and the taxpayer, therefore, being called upon to make an undue sacrifice. If with ever-increasing traffic in future and increased mileage, the railways expect to recover a reasonable return on all the additional capital outlay in the direction of their workshops, it ought not to be difficult for them to find a reasonable means of securing a return under the head of locomotives to a portion of rupees thirty lakhs odd, at which figure the capital outlay of the Company at present stands.

11. The projected manufacture of locomotives in India, we claim, had a direct bearing on the prices quoted to Government for their orders placed in 1920-21 and one or two subsequent orders. The prices in these years were unduly low and in other connection the Tariff Board have themselves discovered that English firms were obliged for a short time in order to keep the nucleus of Works together to forego not only profits but even overhead charges. If, therefore, it is assumed on a conservative calculation that the saving to the railways was of at least £1,000 per locomotive, then the total saving would be somewhere in the neighbourhood of £1,000,000. With all respect this Company must represent that a portion of this saving was directly due to locomotive manufacturers in the United Kingdom and elsewhere being frightened by the policy of the Government, which culminated in the communiqué of September 30, 1921, and by the existence of this Company. If a part is, therefore, given to this Company by way of temporary assistance on a scale fixed by the Tariff Board, it would be eminently fair. By giving the benefit of discussion between the technical alvisers of the Railway Board in this country and the users of locomotives and those who are manufacturing locomotives on the spot, it would result in numerous direct savings for all time to come.

12. We would request the Tariff Board to call for the report of the enquiry, which was promised in locomotive industry by Sir Charles Innes in the course of proceedings of the Select Committee on the Indian Steel Protection Bill in May-June 1924. This enquiry was with a view to encourage the establishment of the locomotive industry in India and to re-examine the position from where it was left by the Tariff Board. We regret that no official intimation has been given to us of this enquiry and if any reports have been received by the special officer deputed to the United Kingdom, such report has not been made available to us and we would request the Tariff Board to get this report.

13. In view of the changed conditions of demand indicated above and the reduced requirements for locomotive orders of this Company on account of their carrying on simultaneously wagon building, the Tariff Board should now come to a decision favouring the grant of temporary national assistance for securing the establishment of locomotive industry in India. The only other practical issue before them would be how much protection or assistance is wanted. We beg to state in the briefest outline the factors bearing on the subject.

(I) Whether the engineering trade in the United Kingdom is in a sufficiently settled condition to induce the belief that prices are not being cut and that overhead charges are being fully recovered and normal profits are added to quotations. Prices, which are the result of a mere desire to exist as a going concern with a recognised goodwill, cannot be regarded as commercially competitive prices and the unfairness of subjecting an Indian enterprise to a blank arithmetical comparison with such prices is obvious.

(II) Unless tenders are called in India in rupees for delivery in India, a proper basis of comparison must be established between the English f.o.b. price and the Indian price. The actual charges by Government over the f.o.b. sterling prices are bound to be misleading apart from the fact that the figure given would be an average figure. The difference between the charges, which a business concern would have to bear, and which the Government pays, arises in several ways:—

(*i*) Government get advantageous exchange,

(*ii*) Government reckon no interest on any outlays which they make from revenue and possibly from ways and means budget,

(*iii*) Government do not insure any material which is consigned to them,

(*iv*) Government receive a very heavy rebate of charges by way of freight paid by them to the shipping Companies.

These disadvantages must weigh permanently against the Indian manufacturer and any calculation for converting the f.o.b. price into a rupee price in order to be fair must include these items on the same scale as borne by the purchases of business houses.

(III) Items, over which the Indian manufacturer would have to spend more than rival foreign manufacturers, would be—

(*a*) Steel, whose price would be increased on account of the protective duties. In the same group falls the additional price, which the Indian manufacturer would have to pay for importing acid quality steel plates for boiler making unless the Railway Board are prepared to accept the best quality plates as produced by the Tata Iron and Steel Company, Limited.

(*b*) Brass, copper and other metals, which in their unfabricated condition are imported in India at a duty of 15 per cent., which the foreign manufacturer does not bear, whereas on the finished locomotive the duty is only 2½ per cent.

(*c*) On all tools, of which there is a very heavy wear and tear at the locomotive works, the duty is paid at the rate of 15 per cent. This duty is not paid by the British manufacturer. The wear and tear of tools is so heavy that they could not be regarded as ordinary capital items, but must bear a recurring charge. The same applies to spare parts and other capital equipment, while the import duty on machinery and buildings, which go into capital account, imposes a recurring charge through the reckoning of depreciation.

(IV) Subvention towards the heavier initial costs involved in starting the manufacture:—

(*a*) *Scale.*—The unit of economic production mentioned by the Chairman of this Company in his last evidence was two hundred locomotives, the Works of the Company having been designed to produce this quantity. This programme differed from that of a shop, which could do mere assembling and which could then handle a much smaller number in conjunction with other activities. It is quite true that in England there are locomotive works which produce per year a smaller number, but the comparison between England and India ought not to be strained as in England specialisation in production is carried very far. Ancilliary works manufacturing certain articles in the bulk for the trade are established, which render it not only unnecessary but uneconomical to attempt to manufacture these parts in a multiple shop. In India until the advance of industry is extensive no intermediary Works of this kind can be expected to come into existence. It is impossible to envisage the growth of locomotive industry from the piecemeal establishment of several small concerns manufacturing one or the other part or a few items at a time. If locomotive industry is to be established in India it must come from the top as a single composite enterprise attempting to do all that is possible in India under one roof and importing the rest. There are engineering works in Calcutta capable of manufacturing certain items, but could they be induced to quote reasonable rates? Would the demand of locomotive parts from the local manufacturers be large enough to induce them to undertake the initial heavy work? These uncertainties render it necessary that the initial outlay for patterns, jigs, dies and other equipment must

be incurred by a central self-contained works and if that was to be done, two hundred was a proper number. If the scale of manufacture is reduced, because the railways required less, or because, of what they require, they are unwilling to entrust more than a fraction to the Peninsular Locomotive Company, the cost per unit may increase.

(*b*) *Cheapest Market.*—The policy of the Railway Board and that of the Indian Stores Department does not appear to have finally crystallised and on the one hand there is the uncertainty about the placing of continuous orders, and when the orders are placed the railways want to buy in the cheapest market transferring any burden from bounties to the general revenue, and on the other there is the demand that the largest number of items should be manufactured in India. In order to manufacture the largest number in India, orders have got to be pooled. Where certain component parts, which are turned out in large quantity and in good quality in the United Kingdom, can be bought cheaper, no restriction should be placed in the first few years on such purchase on the ground that the manufacturer is avoiding maximum amount of manufacture in India.

(*c*) For numerous well-known reasons the operating costs for many kinds of plant are heavier in India than in the United Kingdom even in some older industries. The experience of the State in the manufacture of ammunitions, in the running of railways and in other directions might confirm this fact, which has been observed in several industries. Any disadvantage under this score, which the locomotive industry would have in common with other organizations, must be provided for in whatever form it is decided to give the protection.

(*d*) If in the first few years for any reason of policy or economy the orders are small, it reduces the bargaining power of the manufacturer not only with regard to raw materials but with regard to component parts, which have to be purchased abroad. Apart from all other questions affecting manufacturing costs, this would be also a matter to be taken into account.

14. On the occasion on which the Tariff Board try to determine the form and the amount of assistance to be given to this industry, it would be useful for them to send for the original tenders, which were submitted in December 1923. The Company was then prepared to take orders under the system of open tender rather than remain idle, and the guiding factor was that the loss by working even at the low prices would be less than by being shut down. The figures then given would not have any absolute value to-day, but would serve to remove the notion, which appears to have spread that this Company has been demanding excessive and absurd protection.

15. In conclusion we may be permitted to state that the problem before the Tariff Board is not one of bringing into existence a new industry, but of allowing a plant already in existence to function as it was intended to function. Unless the scales are unduly weighted in favour of the foreign competitor, the industry can in the long run hold its own. This result could be brought about without heavy burden and as in the case of the wagon industry initial assistance is bound to give impetus, which will bear good fruits. Other things being equal, it would be a proud day for India when the Locomotive, which is the final product of modern industry, is manufactured in the country and this manufacture has been brought about by a wise and discriminating policy at the hands of Government.

APPENDIX I.

(LEGISLATIVE ASSEMBLY.)

Manufacture of wagons and locomotives.

Question No. 419.

(Aug.-Sept. 1925.)

Mr. Kumar Sankar Roy.—Will the Government be pleased to state what is their policy with regard to railway workshops in the matter of construction and manufacture of new wagons and locomotives?

Mr. G. G. Sim.—The policy of the Government with regard to railway workshops, in the matter of construction and manufacture of new wagons and locomotives, is that in all cases where it is found to be economical to purchase from private manufacturers this course is adopted.

Question No. 420.

Mr. Kumar Sankar Roy.—Will the Government be pleased to state the number of:—

(*a*) new wagons,

(*b*) new locomotives,

whether for additional plant or for replacement of old plant, which have been constructed at any of the workshops of the railways in India?

The Honourable Sir Charles Innes.—If the Honourable Member will state the period of which the information is required, Government will collect it and supply it to him.

APPENDIX II.

The Railway Industries Committee, over which Mr. (now Sir) Charles Innes presided, reported as follows:—

"We do not stop to point out the difficulties of price comparison, for there are other difficulties of a more serious nature. The principal difficulty is that described in paragraph 65 of the Report of the Fiscal Commission. Industries of this kind require a considerable period for their development. Large capital expenditure is required for plant equipment services and the like, and a considerable time must elapse between the inception of the undertaking and the beginning of actual manufacture. In India, however, the supply of skilled labour for work of this class is limited. It is extremely expensive to import all the skilled labour required and much time and money must be spent in collecting and training the necessary skilled operatives. During the initial stage of development the outturn must be small and uncertain and manufacturing costs must be much higher than those of old established works abroad. This difficulty is inherent in the problem and must always be serious: but at the present time it is especially serious. It is well-known that owing to general trade depression, manufacturers abroad, especially in the United Kingdom, are fighting with their backs to the wall in order to keep their works open and their men employed, and they are quoting prices which in some cases at any rate we believe to be below the commercial cost of production. In any case they are quoting prices with which firms in India cannot possibly compete."

"It is doubtful whether an Indian concern can for many years to come compete against so powerful a concern without a very large measure of assistance from Government. At any rate, it is certain that it cannot do so in the early stages of its existence. Thus we are driven to the conclusion that a guarantee of orders at a price fixed in accordance with Rule 10 of the Stores Purchase Rules will not by itself suffice to encourage industries which produce railway material of a fabricated nature such as wagons and locomotives."

"It will now be clear why our Chairman decided that we must await the Fiscal Commission's Report before submitting our own report. For we see no escape from the conclusion that the industries, which we are now discussing, if they are to be developed—or rather kept alive—in India, must temporarily get some form of protection or assistance from Government."

"We do not think that any useful purpose would be served by our going on to examine the further question whether special measures should be taken to develop these industries, as, for instance, by guaranteeing them orders at a price at which they can work, even though that price may exceed the price admissible under Rule 10 of the Stores Rules."

"The only recommendation, therefore, which we can make is that if a Tariff Board is constituted, and if the question whether protection should be extended to the steel industry is remitted to that Board for examination, it should be instructed also to investigate the wagon, locomotive and similar industries, to consider the bearing on such industries of any proposals it may make in respect of steel and to make such recommendations as it thinks fit in regard to these industries."

APPENDIX III.

INDIAN LEGISLATIVE ASSEMBLY.

21st January 1926.

Rupee tenders for India.

The Hon'ble Sir Bhupendra Nath Mitra,

"The Honourable Member will no doubt realise the difficulties entailed in this subject to which I have referred on several occasions in this House. He will understand, for instance, that it would be quite impossible, without *undue sacrifice of economy* and also without incurring *undue risk of unsatisfactory supplies*, to apply what may be called the rupee tender purchase system indiscriminately to all kinds of plant and stores required by Government. The Government of India have therefore thought it desirable to examine in the first instance the question to what classes of stores the system could be applied without incurring the risks I have mentioned. This has necessarily involved detailed discussion with the various purchasing and consuming departments of Government, but I am able to say that these discussions have now got so far that a list of the different kinds of stores to which the system might be extended without undue risk has been complied and is now under consideration."

(2) *Letter from the Peninsular Locomotive Company, Limited, Bombay, dated 13th May 1926.*

We beg to acknowledge your telegram, dated 11th May, as follows:—

"230 your letter thirtieth April. If you desire continuance of protection for wagon building industry submit by fifteenth instant representation according to paragraph two Board's Communiqué."

We beg to confirm having sent a reply as follows:—

"Tarboard, Shillong. Have little to add regarding wagons to statement submitted in August 1925 but preparing supplementary note as desired stop."

A statement with regard to the wagon industry was not sent by this Company as the Directors of the Company still consider that the primary object of this Company is to manufacture locomotives. The other reason was that a comparative statement of costs covering the whole period since the first report cannot be sent by this Company, whose operations have only started recently. All the same a brief resumé of the grounds, on which the continuance of protection to wagon industry is desirable, and the form in which such protection should be given, is being prepared and will be despatched as early as possible.

Since receipt of a press communiqué, dated 6th May 1926, certain cables have been exchanged with our Chairman in London and we trust you will condone the delay of a few days in submitting our statement.

(3) Representation, dated the 15th May 1926, from the Peninsular Locomotive Company, Limited.

We beg to acknowledge your letter, No. 232, dated 11th instant. As already intimated, the Directors of this Company regard the primary function of this Company to be the manufacture of locomotives. The lay-out of the Works is for locomotives and a very large amount of capital equipment is lying idle, the losses on which are at present being borne by the Company. Hence necessarily greater emphasis was laid on the need for protection to the locomotive industry.

Regarding wagons, as desired, a statement urging continuation of protection and certain alterations in the method is sent herewith. In their report on the grant of supplementary protection, dated 2nd September 1925, the Tariff Board have stated with reference to this Company that they gave no figures of costs and declined to come for oral evidence and their tender was not based on actual experience. The facts of the case are that negotiations, which began in April 1924, with the Railway Board, came to a conclusion only in September 1924, resulting in an order of five hundred A-2 wagons. But the erection of the Works, which had been suspended in 1922 when negotiations for a locomotive order broke off, had to be completed. Arrangements were, therefore, made from October, 1924, for bringing out staff from England for finishing the erection. Additional machinery was from time to time suggested by the Indian Stores Department, whose advice and assistance we here gratefully acknowledge, but the actual arrival of these machines and their functioning took considerable time. No reliable figures could, therefore, be given of the manufacturing costs of this Company at the time of the Tariff Board's last inquiry when the erection of the works was still going on side by side with such activity for wagon building as was possible. No discourtesy was, therefore, intended; nor was there any desire to conceal any relevant facts bearing on the problem under investigation.

We have sent a cable to our London Office and on definite news being received from there, shall put ourselves in touch with you in order to ascertain the convenience of the Tariff Board with regard to our oral evidence.

The Statement of the Peninsular Locomotive Company, Limited, supplementing their statement submitted on the 8th of August 1925, with regard to the question of assistance to wagon manufacture.

The Tariff Board have invited the views of firms desiring the continuance of protection under three heads:—

I. THE GROUNDS ON WHICH THE CONTINUANCE OF PROTECTION IS NECESSARY IN RESPECT OF WAGON MANUFACTURE.

(1) The main ground would be to equalise the price of steel to the total manufacturer with that paid by his foreign rivals. What has been hitherto attempted is to neutralise the effect of duties only, but even if there were no duties the Indian steel manufacturer can always sell his steel to local manufacturers at the price at which a European wagon manufacturer can buy *plus* freight, insurance, interest, ordinary revenue duties and intermediate handling at both places. The State is not bound to bring down the price of material to the local manufacturer to this level, but this gives the extreme limit for the purposes of argument, where the State has other grounds for encouraging the establishment of a particular industry. This consideration is important in the analysis though it would get discounted in a fair price comparison. The final price offered by any manufacturer is, however, the result of many factors, some pulling in one direction and some in other.

(2) Since the first inquiry of the Tariff Board the exchange has been rising and has remained now fairly steady at 1*s*. 6*d*. But the full economic effects of this rise with reference to the prices in India and in Europe, with reference to money rates and their effect on production and wages, could not be

said to have been worked off yet. Whatever differences of opinion there may be as to the ultimate permanent effects of this rise of exchange, no one disputes that it has a temporary effect and until this temporary effect is for practical purposes completely discounted, continued assistance by the State becomes necessary. Apart from the question of the Indian exchange with United Kingdom, the sagging of several Continental exchanges, particularly Italian, French and Belgian, could not but affect the prospects and progress of wagon manufacture in India. Until Continental prices, therefore, show a definite tendency to rise and exchanges are finally fixed, an indeterminate position would continue in which the Indian wagon manufacturer must be allowed to have reasonable sense of security and hopeful outlook through the feeling that against any unfair advantage to his foreign rivals, the State in India is watchful and will protect him.

(3) So long as the system of calling rupee tenders in India for delivery in India has not been established, the complaint of the wagon manufacturer that he suffers in price comparison will not be radicated. On the question of price comparison there has been since the report of the Railway Industries Committee a good deal of ground covered especially by the first report of the Tariff Board themselves, but there are certain factors which are permanently against the Indian manufacturer. These are as follows :—

(*a*) *Interest.*—The Government are not in the habit of reckoning interest for any payments made from revenue balances or even from the ways and means balances. The prior payment, therefore, to the European manufacturer gives him a benefit in respect of interest and a disadvantage to the Indian manufacturer, who has to pay out perhaps months beforehand for his material from his working capital, which would be for most concerns for these purposes borrowed from the banks.

(*b*) *Insurance.*—Government does not insure any material consigned to it. A private individual, on the other hand, has to pay full rates of insurance on all that he imports and fair conditions will be established only if tenders were called in India, in which the European manufacturer or his agent would have to add to the f.o.b. sterling price at European port the whole of the insurance charges payable on the value of the wagon.

(*c*) *Duty.*—A minute examination of the factors would necessitate the taking into account of the fact that the payment for duty on imported parts is made by the Indian manufacturers months ahead before they receive payment for the finished article, and the task of finding the necessary finance and bearing interest for it is to the disadvantage of the Indian manufacturer.

(*d*) *Freight Rebate.*—Government receive a considerable and heavy rebate on freight charges and if the price comparison involves only the addition of actual freight paid by them, it would not be at all fair.

(*e*) *Erection charges.*—On the variety of practice amongst Indian railways of charges in connection with erection, there was sufficient evidence at the time of the first enquiry. The Tariff Board calculated these at Rs. 325. We do not know whether this figure took account of anything more than the direct payment to contractors for erection and whether full overhead charges, at which the same amount spent on labour would be reckoned in a private works, were calculated in this.

(4) Some of these factors, it may be noted, are variable from year to year and others would vary according to the type of wagon. A standard figure, therefore, of the bounty as fixed by the Tariff Board over the lowest foreign price would favour the types like C-1, which are cheaper, and penalises those manufacturing heavier and dearer types like A-2 as this Company has been doing. Further so long as there is no purchase by rupee tender in India, it is only the special machinery of the Indian Steel Industry (Protection) Act,

which involves even information being given to wagon manufacturers of Government's requirements. Abolish the provisions affecting wagons in that Act, and we fear that there will be the reversion to the older practice, in which the Railway Board may or may not even inform local manufacturers of their requirements. There is nothing in the existing stores rules compelling them to give this information or to call tenders in India.* In fact the existing stores rules compel, when the enquiry exceeds a particular amount, an indent to be sent to the Director-General of Stores in London. It is only the Indian Steel Industry (Protection) Act and the provisions affecting, wagons, which therefore, have involved a certain amount of correlated exchange of information between wagon manufacturers and the Railway Board on behalf of Indian railways.

(5) A premature withdrawal of protection granted to the wagon industry is likely to disorganize the efforts, which have been made hitherto and which have, according to Tariff Board's report regarding grant of supplementary protection, borne such satisfactory results. An argument for the abolition of the protection would arise if protection had failed, but, as it has succeeded it must be kept up until it is definitely proved that the need no longer exists. The Tariff Board might very reasonably put the burden of proof on those who advise the discontinuance of the protection. The response given by the wagon industry to the very cautious policy pursued by the State with regard to wagon manufacture justifies its continuance for sime time to come.

(6) One of the arguments, which may be advanced against the continuance, is the burden on the general taxpayer. On this we urge that a longer view should be taken. It has not been proved that protection has involved increased cost in the case of wagons. On the contrary during the whole period that protection has been in operation the cost to the State of wagons has been constantly on the decline. In other words, Government have got very full benefit of the fall of prices throughout the world as well as in India. They have made their purchases of wagons in India under conditions of hard competition and have actually been paying less than they would have had to pay, had the wagon industry of India been disorganized with an isolated Company struggling on here and there. We have heard that in the United Kingdom at least there was at one time a wagon ring deciding on what quotation shall be sent for the requirements of Indian State Railways. It is legitimate to hold the view that the wise policy of the State with regard to protection to Indian concerns has enabled this ring to be broken and to secure material, for which otherwise the railways might still have been paying at a heavy rate. Apart from the immediate economies realised in this way, more than counter-balancing the amount of bounty, the permanent benefit from the point of view of military security must also be considered. There is further the opportunity for the Indian manufacturer of wagons and the user of wagons, the Indian State Railways, to be near each other and to react through mutual exchange of views in constant improvement of the type. In fact when by the continuance of the same policy of protection larger capital has been attracted into this industry and the zest of competition increased, India will be permanently free from abject dependence either as to supply or prices on foreign sources, and the State Railways will save in the long run a hundred times more than the small amount, which the taxpayer is paying out at present to sustain the wagon industry in their fight against unfair conditions of foreign competition.

(7) It would hardly be necessary to emphasise the old argument, which is nevertheless true, *viz.*, that a portion of the money spent by the State in assisting the wagon industry returns to the State in the form of payment by the wagon trade of local charges, provincial taxation and Imperial duties. The other argument, which weighed with the Tariff Board and the Government of the country was that if the steel industry is to be protected, then

* For the purposes of comparison we would refer to the practice in connection with locomotives and locomotive parts. Even information is not available with regard to the latter and with regard to the former we have had no official information with regard to the Railway Board's call for tenders of 89 standard locomotives now being placed in the United Kingdom, though we have never ceased to be a locomotive manufacturing company.

the best thing that can be done for that industry is to provide a market for its products in India. The wagon manufacturer of India is a safe purchaser of the Steel Company's products not only in rolled steel, but so far as their plate mills are concerned. There is, besides, the argument of great importance that if the wagon industry prospers in India even at a slight temporary sacrifice to the taxpayer, a vast amount of money is retained in the country and circulates through the payment of wages and salaries. Taking four thousand rupees per wagon, the total amount spent in the country would be suggested by the wagon trade and putting a rough value on them of four thousand rupees per wagon, the total amount spent in the country would be a crore and sixty lakhs of rupees. Taking Rs. 1,500 per wagon as the charges of one kind or the other, other than the cost of materials, there is on a very rough calculation a sum of sixty lakhs of rupees circulating in the country by way of wages and salaries, from which also a certain percentage must trickle back into the treasury of the State. No money value, however, can be put upon the increase of technical skill and the greater and improved efficiency of several thousand men engaged in this trade and the direct and indirect benefits which the community is bound to reap from their existence. There is no greater economic calamity than the compulsory conversion of skilled labour into unskilled labour under pressure of unemployment. The discontinuance of assistance to the wagon industry, if it resulted into the disbanding of the nucleus of trained labour which has been brought together, would bring about this disaster.

(8) So far as the Peninsular Locomotive Company is concerned, an additional ground for temporary continuance of protection to the wagon side of their activities arises from the fact that, located at Tatanagar, the payment of wages and the conditions offered to labour are governed by the higher scale which through tradition or the need of their industry the Tata Iron and Steel Company have established there. The higher wages and better conditions, however, cannot survive without restrictive provisions of trade-unions, which do not exist in India. Therefore, the suction, which has started at Tatanagar, must bring within its fold before very long a larger mass of skilled labour and if there were no other obstacles to the economic adjustment of wages, the higher scale prevailing there at present as compared with that in other manufacturing centres in India must come down. It is further notorious that even after the payment of this higher scale there is no approach to European efficiency for the large bulk of the working men and for a considerable time. As the industry becomes older not only the discipline and "espirit-de-corps" at the works improves, but the need for costly supervision diminishes. This is also one of those factors on account of which, amongst other things, the continuance of protection for some time longer would be justified.

II. WHETHER THE MEASURE OF PROTECTION NOW GIVEN SHOULD BE INCREASED OR DIMINISHED.

(9) Arguments bearing on this were stated at length in a statement submitted by this Company in August 1925. Various other difficulties were also indicated in the actual administration of the bounty and it was pointed out that subsidy in the form of money was not the only manner in which the State could help. It was indicated amongst other things that continuity of orders was a very important factor leading to reduction of costs and, therefore, reducing the contribution from the State, as well as the period of time during which assistance would be necessary. We will take this occasion to indicate that the tenders given by us in the month of January 1925 were the lowest both with regard to A-2 and C-2 wagons, not because the price quoted by us was expected to cover all our costs and give us normal profits, but because we were afraid of being left out and not having any orders at all. A more reasonable tender was sent by us in November 1925, but it appears that another Company found itself without sufficient orders on their books and gave a quotation, which must on a close examination, we think, be found to be uneconomical. While the State, on the one hand, claims that they

have given bounty, the system of administering bounties which does not involve some kind of continuity of orders, is such that in effect they are taking away by the left hand what they are giving by the right hand. We would further illustrate the position of our Company by saying that when our tenders were rejected in December 1925, we were extremely apprehensive as to whether for some months towards the end of the official year ending March 1927, we should be obliged to close down the works for want of orders on our books. This apprehension on our part was not shared by the Railway Board, relying on the estimate of our output by the Indian Stores Department. It is very difficult to say whether there will or will not be a period of enforced idleness towards the close of this official year, but, fearing that it would be so, on receiving an intimation that our tenders had been rejected, we sent an urgent telegram to the Railway Board offering to take two hundred wagons at the lowest price at which they were placing the order. This was expected by us to be a stand-bye to keep the nucleus of labour, etc., during the last two or three months during which we still fear we shall be without work. The standing charges during these months in our case this year and in the case of any Company during a period in which they are left out either through their quotations being high, or, what is more likely, through the quotation of other companies being unduly low and calculated merely to cover direct costs, must inflict a loss on the wagon manufacturer, which would materially curtail any stimulus which the bounty system may have given. As a matter of fact the actual administration of the bounty system by the Railway Board has involved setting aside of the tenders and the fixing of orders by individual negotiation in a manner that elicited from the Tariff Board the term " mystification " in application to the bounty. The Railway Board spoke of " accepted " prices and not " tendered." Many complicated calculations have to be gone in by Government and they have to take into account numerous factors. The Government at present appear to be under the impression that by not accepting the full recommendations of the Tariff Board as to the amount of assistance necessary, they have shewn a better grasp of the situation than the Tariff Board themselves, but we think this is a misapprehension as the guiding factor at the time of the call for competitive tenders in the mind of the tenderer is that he must have an order for a certain amount to keep the works going regardless of whether it gives him a high profit or no profit at all. The Tariff Board in their report on supplementary protection spoke of " wagon building firms themselves being in the best position to decide what is the lowest price which makes an order worth accepting." It is only those firms who are engaged in general engineering and not in wagon trade alone, who can divert at any time their activities to other fields. For the wagon manufacturer proper the aim of the Tariff Board should be, in the first instance, to see that for wagons produced protection on the scale, which they recommended in their first report, is actually accorded to him and that the struggle for bare existence on the part of companies, which have laid out vast sums in specialised machinery and block, does not result in beating down the price with a continually diminishing bounty per wagon. If the bounty represents a genuine difference between costs in two countries as estimated by the Tariff Board, then for its reduction to one half or one-third the Government cannot be congratulated. No one can accuse the Tariff Board of having recommended an extravagant scale of assistance. They themselves have admitted that " the scheme suggested was designed rather to prevent the immediate disappearance of the wagon industry than to ensure as rapid a development as might in favourable circumstances be possible." (Supplementary Protection Report, page 57, paragraph 87). The idea of discriminating protection on certain lines set before the country through the the Tariff Board is directly defeated if the wagon manufacturer does not receive all that was intended to be received by him after comprehensive and expert enquiry at the hands of the Board.

(10) We would ask to be allowed to refer to another important factor affecting wagon manufacture, on which again the whole outlook and progress of the industry seems to depend. It is well known that certain parts going into wagons have to be imported, from the United Kingdom, because they are not yet made in India. Further, certain other parts, which a wagon manu-

facturer intends to manufacture himself later on, have as a matter of convenience to be imported from the United Kingdom, because they can be had cheaper than their the cost of his own manufacture at his works or the quotation received by him from engineering firms located in India. Difficulties have been experienced by us with regard to orders placed for component parts in India resulting in large delays through no fault of our own. Thus an order was placed with a large well known engineering works of Calcutta for screw couplings and after much valuable time had elapsed we were informed that the raw material, which they were using, *viz.*, " D " class steel from Messrs. The Tata Iron and Steel Company did not come up to the specification. They, therefore, asked for the contract to be cancelled as they were unable to give the stipulated or any deliveries till they had imported the raw material from United Kingdom. Experience of this kind often becomes a deterrent to orders being placed in India, particularly because the Railway Board provide that no failure on the part of the sub-contractor will be regarded as a reasonable explanation for delays in delivery. Further, clause 5 of the conditions of contract issued by the Railway Board specifically provides that if any parts are imported from abroad they must be accompanied by inspection certificates issued at the other end. This inspection takes place at the hands of the consulting engineers to the State Railways. We have found, unfortunately for ourselves, that material, which was ordered to specification and duly inspected in the United Kingdom before shipment, was reinspected at this end involving enormous amount of cross correspondence and cables and great anxieties to the Works Manager and everybody. We were able to make representation to the Great Indian Peninsula Railway administration, who recognised the difficulties caused to us by such reinspection and passed some of our bills, but we have not yet received final decision from the Railway Board, who, we understand, are examining this question. We have no doubt the Railway Board will ultimately issue orders precluding double inspection. We may state for the information of the Tariff Board that inspection fees on all imported parts are payable by the Indian wagon manufacturer and the difficulties appear to us to be arising out of the fact that the mode of inspection in the United Kingdom is different from the method adopted by the Indian Stores Department in India. Otherwise we cannot understand how any faults, which came to the notice of the Indian Stores Department Inspector at this end failed to be noticed at the other end. We have taken this opportunity of starting some of these difficulties, because if there is any check on the output of a works from any of these causes, it upsets all financial calculations as to costs and, therefore, is likely to defeat the aim which the Tariff Board have in recommending bounties. We repeat what we said at the beginning that it is more important to see that the bounty actually recommended by the Tariff Board reaches the manufacturer and is not defeated by conditions of competitive tender or any other procedure from the moment of the calling of the tender up to the time of the payment for goods delivered being effected. The bounties are at present payable from general revenues, but we think the Railway Board as a whole must share the purpose of the Government in instituting these bounties, *viz.*, that wagon manufacture is to be encouraged until it is sufficiently well established to hold its own against foreign competition. We trust the Tariff Board, in making any recommendations as to the form and amount of protection will throw out a general suggestion for securing speedy and satisfactory solution of all small issues arising out of this procedure whenever they are represented to the Railway Board until more experience is gained.

(11) We further suggest a closer examination by the Tariff Board of the issue of railway materials certificates only to concerns at present exclusively engaged in the manufacture of wagons, *viz.*, the Indian Standard Wagon Company and this Company. Both these are located inland and operate through the port of Calcutta for all imported parts as well as for component parts manufactured in Calcutta. So far as the components are concerned, if it is desired that engineering firms should be encouraged to specialise as ancilliaries to wagon companies, instead of wagon companies trying to produce everything on the spot, then special rates from Calcutta to the works would create a traffic,

which would not otherwise come into existence, and would lead to the utilisation of the skill and plants already in existence. So far as the carriage of imported parts from Calcutta to the works is concerned, the lower freight charged by the railways would benefit the railways as a whole and the Railway Board ought to have sufficient authority to pass orders for the railway material rates to apply to this traffic as the general advantages to the country in the long run are big enough to over-ride any objection from individual railway companies. If it is a matter of moment to the Government of India and the nation to see wagon manufacture established, then why should the local manufacturer be penalised in respect of the price which he has to pay for parts which are not at present manufactured in India, particularly by having this price unnecessarily swollen by the application of full freight rates? The railways themselves must feel that even this much traffic in imported parts of wagons is there, because the wagon manufacturers exist. If they were wiped out, there would not be this traffic, on which they would not earn either this or any other rate. So long as therefore they are not out of pocket over this traffic, this traffic should be scheduled for railway material rates. Further we have come to learn that on some occasions the railway materials certificates are so issued. We understood, for example, that if we purchased vacuum brake gear from the local agents of a particular firm in Calcutta, the carriage of this to our works would be at railway material rates. The material from the same Company purchased at their headquarters and shipped out here would have to bear the ordinary rates. We cannot understand why this should be so.

(12) We would suggest that the question as to whether the present protection should be increased or diminished be judged in the following manner :—

An analysis should be made out of the various wagon manufacturing companies in order to find out whether

(*a*) the industry is just kept alive, *i.e.*, the losses suffered by it are not so great as to wipe it out,

(*b*) the industry is kept up in a condition where it incurs no loss, but makes no profit,

(*c*) the industry is making normal profits earned by such manufacturers in other countries or normal as applied to the engineering trade as a whole in India,

(*d*) the industry makes out a profit over and above the normal return to the capital invested in engineering trade in particular or industries in general.

We would urge that until the Tariff Board have actually found that the assistance by way of bounty or otherwise given on their recommendation has brougt companies in class (*d*), protection should be continued on the scale on which it is and should not re reduced. If the Tariff Board find that the present scale of protection by way of bounties does not bring all concerns even in class (*b*), then it is a clear argument for increasing protection. It is possible that such accounts may not be available to the Tariff Board for some time as complete accounts over any period takes a little time to audit. It is also possible that the form, in which the accounts of wagon manufacturing companies are made out, may not enable the Tariff Board to come to a definite conclusion on these lines, but we consider that this would be a sound test. In the meanwhile the Tariff Board should take account of every factor which has gone to reduce the real succour, which was recommended by them in their first report, or to nullify it. Some of these factors have been stated in our note, dated 8th August 1925, and others have been stated above. We think that the first thing to do is to increase the nomial protection in order to bring it to the scale of the real protection recommended originally. Whether it should be increased beyond that or not would depend on the desire of the Government as to whether the Government wish to bring about increased production of wagons in India. To us it appears that if further capital is to be attracted into this industry, then it is better to have a larger amount of protection spread over a smaller period as this is more effective for the purpose than the same sum spread arithmetically over a large number of years. Since the wagon output in India supplies only

a part of Government's requirements, which by the increased mileage and increased traffic are likely to grow, we think there is a bigger scope for increased production. New capital, however, will not be attracted for the older works or for the erection of new works until it is demonstrated that the actual profits earned on the capital hitherto invested are high. A scale of protection, which aims at stimulating output, is bound to bring higher profits to those who are first in the field and any narrow view of their initial earnings is not likely to attract more capital into the trade. The published accounts of no company engaged in the wagon trade could induce a belief that at the present moment those profits are high. We, therefore, believe that there is considerable scope for the increase of protection for the objects which were enunciated by the Tariff Commission and for the reasons which were sifted and accepted by the Tariff Board in their first report.

III. Whether the protection should be given by means of protective duties or bounties.

(13) We suggest that protection should be given by means of tariff instead of bounty. As the wagons involve a lot more fabrication than ordinary structurals, we cannot think that if the protection had been by means of tariff, it would have been less than 25 per cent. The general revenues would have benefited and railways would have had to pay a little more as they have paid on fabricated steel for buildings, station yards, etc. The stimulus to industry would have been distinct and the response greater than under the present halting system of bounties.

(14) As the Tariff Board have only stated their conclusions, the arguments, which weighed with them for the preference of bounties to tariffs for the wagon industry are somewhat obscure. In their report on supplementary protection they have stated that the increase in wagon output, which has actually come about, was not anticipated by them in March 1924. We may state that the increase, which is anticipated in the wagon manufacturing capacity of India, is still under-estimated. If the Railway Board have thought it proper to place an order for 3,500 wagons in India, the wagon industry does not give a mere fraction of the requirement, but covers almost half of the total. If a tariff were, therefore imposed and if it were declared that this tariff will not be modified in the downward direction for the next five years, the output would certainly increase. Speaking for this Company, there is no doubt that the output of a hundred wagons a month, for reaching which all our energies are at present directed, would be achieved before the end of this year. But if we felt secure we would not hesitate to put up certain additional plant necessary for doubling this output.

(15) The other advantage of assistance by bounty over tariffs is that when the bounty increases with production, it gives a direct stimulus. The experience in the past in India, however, has been that the bounty has constantly gone on diminishing with increased production. The diminution has not been due altogether to normal trade conditions. The following table with regard to A-2 type wagons is instructive :—

Date of tender.	Date of order.	Price quoted by the Peninsular.	Price accepted by Railway Board.	Bounty recommended by Tariff Board.	Actual bounty.
		Rs.	Rs.	Rs.	
...	18-9-1924	...	4 400	850	*nil*
13-1-1925	16-3-1925	3 898	3,898	700	475
10-11-1925	8-12 1925	4,098	3 470	580	not stated.

(16) We cannot think that there were normal trade factors between the time of placing these three orders justifying a fall of prices successively of as much as Rs. 502 per wagon on one occasion and a further fall of Rs. 428 on another occasion. The Tariff Board themselves in their report on supplementary protection states that the fall of prices in materials between 1923 and 1925 according to two firms is either Rs. 587 or Rs. 555. It is instructive to compare the prices paid by the Railway Board :—

Wagons completed before 31st March 1925.	Wagons completed after 31st March 1925.	Orders placed in March 1922.	Orders placed in November 1925.	Difference.
	Rs.	Rs.	Rs.	Rs.
A-2 Rs. 4,750 . .	4,200	3,888	3,470	1,280
C-2 ,, 4,450 . .	4,000	3,800	3,110	1,340

—	1923.	1925.	Difference.
	Rs.	Rs.	Rs.
Average cost of materials . . .	3,088	2,517	571

(Ref. page 56, paragraph 86 of Supplementary Report.)

(17) Whereas the fall of prices justified by Indian conditions should be somewhere near Rs. 571, it has been from Rs. 1,280 on the A-2 type wagons to Rs. 1,340 on the C-2 type wagons. All this requires an explanation. The fact that the English prices are converted at 1*s.* 6*d.*, instead of 1*s.* 4*d.*, does not give to the Indian manufacturer more than a fractional advantage on the material imported and this advantage would be already discounted in the statement of the cost of materials. In other words, the Indian manufacturer has been compelled to accept lower prices though there was nothing in the Indian situation justifying this. Perhaps an explanation would be found in the persistent reduction of the real bounty. What the bounty is for different types of wagons in December 1925 has not been stated by the Railway Board notwithstanding the recommendation of the Tariff Board and in spite of a specific request to this effect having been made by the Indian Engineering Association (No. 35-S., dated 20th March 1926 from the Railway Board to the Indian Engineering Association). It would be instructive to make a parallel table of prices paid for these two types to manufacturers in the United Kingdom for the last few years and of the prices paid to the Indian manufacturer. While as far as we can see the variation in the British price in sterling has not been considerable at any time, the fall in the rupee price paid to the Indian manufacturer, as will be seen from the above, has been phenomenal.

(18) That there should have been such a fall with the bounty system, however imperfect it may be, proves conclusively that the industry would have been wiped out without the bounty. It also proves that the provision on paper of a bounty does not necessarily mean that the Indian manufacturer receives all that he should. In our case the lower quotation in January 1925 was with a desire not to be left out without any orders on our books and we shall be very glad if the Tariff Board would ascertain whether in the price tendered by another firm in November 1925 for A-2 wagons of Rs. 3,470 and for C-2 wagons of Rs. 3,110, the same motives were not in operation. We frankly

stated in our previous statement that our quotation was based on ascertained English prices, but it would be found that we were not alone amongst the Indian manufacturers, who based their quotation on such information as they had from the United Kingdom. This search for information from the other end is bound to go on unless the Government earmarked four thousand wagons as suggested by the wagon trade on the occasion of the previous enquiry for being placed in India under Indian conditions only. We suggest that surplus orders for wagons should be placed abroad, if there are no changes in the system of calling tenders as at present, only after the books of the Indian manufacturers are full. We are not certain that the complications of the bounty system may not grow hereafter. An enterprising engineering firm may seize an opportunity of a slight slackening in their own trade to turn their hand to wagon. The Tariff Board themselves referred to the case of a Karachi firm, which quoted for wagons actually below the lowest price quoted from the United Kingdom. The bounty system as administered at present would topple down like a house of cards in such a case in spite of the fact that the local manufacturer may have achieved a remarkable degree of efficiency and organization. Further, now that underframes and wagons have been put on the same basis with discretion to the Railway Department to shift the bounty from the one to the other firms making both underframes and wagons are likely whenever they have secured a satisfactory order for one or the other to under-quote their rivals at the time of the next tender. This lower quotation can be as on a previous occasion with reference to a very small number of a particular type, thus forcing the hands of the Railway Board to fix the bounty on that particular type from this lower figure.

(19) A further weakness of the bounty system as administered at present resulting in unfairness is indicated below. In the tenders submitted on the 13th of January 1925 we had quoted for 215 A-2 wagons and 125 C-2 wagons, in both of which our quotation was the lowest. The Railway Board had in their hands orders for 480 A-2 wagons and 425 C-2 wagons. They decided to place with us an order for 480 A-2 wagons at our quotation. We would have very much preferred the order for 425 C-2 wagons at our quotation. We have read carefully the reasons given by the Railway Board in the Railway Administration Report of the period ending March 31st, 1925, for their action, but these reasons are not convincing.

—	Type.	No.	Price.	Total turnover.	Bounty per wagon.	Sum of bounty.	Percentage of bounty.		
							On gross turnover.	Actual.	As it should be.
			Rs.	Rs.	Rs.	Rs.			
Peninsular	A-2	480	3,898	18,71,040	475	2,28,000	12·1	43·4	53·7
I. S. W. Co. Ltd.	C-2	425	3,800	16,15,000	700	2,97,500	18·4	56·6	46·3

(20) It is noteworthy that the prices, at which the order was placed for C-2 wagons with the other firm, was not a tendered price by them, but was the result of negotiations, to which we were also open. We think the total amount of bounty, *viz.*, Rs. 5,25,500, should have been distributed between these two firms on the basis of turnover, in which case we would have received as our share Rs. 2,82,193-8-0, *i.e.*, 53·7 per cent. of the bounty, instead of

which the amount actually assigned to us was Rs. 2,28,000, *i.e.*, 43·4 per cent. Why this was not done we do not know. In bringing out this fact we have no desire to complain against the Railway Board, to whom we are grateful for at least placing this order with us as without that order our Works would have been at a standstill to-day. But we must point out the inherent defect of a system, which, administered by fair-minded men with best intentions can lead to assistance being given even to the two firms engaged exclusively in the wagon trade at the time of settling the same tender on a scale so widely divergent from one another. Our complaint is not that orders, which would have come to us by being the lowest tenderer, were being given elsewhere, but that the bounty, to which we were entitled, was diverted elsewhere without an option being given to us for deciding which of the two orders we preferred. Had such an option been given, it is possible that we would have preferred the C-2 type wagons at Rs. 3,800 to the A-2 wagons at Rs. 3,898. The difference between these two types in the final price, at which orders were placed in December 1925, was Rs. 360. The enormous amount of difficulty that we have experienced since with regard to the sheets delivered by the Tata Iron and Steel Company, Limited, would also have made this order for C-2 wagons much more acceptable to us. There was no reason to suppose that C-2 wagons could not be produced at a price lower than Rs. 3,800. In judging this, it should be noted that the reduction in price secured by the Railway Board a few months later was Rs. 690 per wagon for C-2 type as against only Rs. 428 for A-2 type, which shows that they could have been so produced. Nor was the need of this Company for bounty less. On the contrary as an older established wagon Company, the other firm was in a much stronger position and if it came to a question of comparison, it would do with less assistance than the Peninsular which had just started operations. We have no desire to say that all this was deliberate on the part of anybody, but we think that a system, which cannot be administered without such things occurring, should be more closely examined, and should we find that on several occasions hereafter the scales have weighed against us in this way, it should give us a very legitimate cause for complaint. We think it would be safer for the Railway Board and for everybody concerned if a tariff was put in on wagons imported into India and if tenders were then called not separately as hitherto, but in rupees for delivery in India. All firms outside from India, whether from U. K. or elsewhere, would then add to their final price full market rates for charges for bringing material into India including the full duty.

(21) A fear has been expressed that tariffs might produce vested interests. But in a policy of discriminating protection recommended after expert enquiry by the Tariff Board, such fears must be faced. We think that the danger of vested interests as well as other undesirable features connected with protection is much greater in bounties than in tariffs. With the imposition of a duty at one stroke all procedure would be simplified and there would be no room either for negotiations or for discretion. Every one would be subject alike to the same conditions and the policy of protection would have a better chance of being fairly judged than at present with numerous complications, most of which have been indicated above. While bounties have enabled those firms, who were already in the field as the result of the general avowals by the Railway Board in their communiqué, dated 1st March 1918, to make a greater effort and secure a systematic output, the fact that three years of the grant of bounties have not brought in additional capital in the field or attracted those who are supplying the Indian market hitherto from other centres to settle in India, shows that for one reason or the other, there has not been induced in the mind of the investor that degree of confidence which would secure this result.

(22) The proper administration of the bounty system in future should be on the percentage of value rather than a fixed sum, and we suggest that if it is going to be a percentage, the substitution of a tariff would be better, simpler and more satisfactory to everybody concerned. We would, therefore, suggest a protective tariff and we would put this tariff at 33⅓ per cent. This might be undoubtedly higher than the protection hitherto granted, but its

effects would be certain and if it results in other wagon firms being established in India or existing works being extended, then by standardized production and internal competition the actual burden borne by the purchaser of railway wagons would go on automatically diminishing till it disappears.

(23) We, therefore, suggest :—

(*a*) that a duty should be levied on imported wagons and it should be at the rate of 33⅓ per cent,

(*b*) that refund should be given to the wagon manufacturer of any duty charged either on the present scale or on the newly proposed scale on all imported items required for wagon building, which are not being manufactured in India to the required standard to the satisfaction of the Indian Stores Department,

(*c*) that tenders for Government railways should be called in India in rupees for delivery in India,

(*d*) that four thousand wagons should be earmarked for manufacture in India and orders should be placed abroad only after the local manufacturers have their books full,

(*e*) that if the bounty system is continued, its administration should be simplified, greater publicity should be given to the decisions of the Railway Board and at the time of the call for tenders the amount of bounty, which will be attached per wagon to the total quantity of wagons placed in India, should be declared, and the amount of bounty should vary for each type only according to value of type,

(*f*) that since the bounty is in the very nature of it a gift recommended after careful examination on national grounds, it should not be curtailed merely because one of the firms tendering is frightened through motives of self-preservation into quoting very low. The bounty recommended by the Tariff Board should not be treated as a maximum to be worked down but should be a minimum to be adhered to,

(*g*) that if the Tariff Board is satisfied that the maximum fall of prices in wagons has been already achieved, some sort of scheduled composite prices should be fixed for a number of years leaving to the manufacturer the residual benefits or otherwise from his activities.

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(4) *Letter from the Peninsular Locomotive Company, Limited, dated the 19th May 1926.*

We beg to invite reference to your telegram No. 237, dated 12th instant. In this connection we beg to give below the prices paid by us as desired by you:—

	Price Rs. A. P.	
1. Cast steel axle boxes to I. R. C. A. specification with bronze bearings, etc., Complete journals 10″×5″, to drawing No. 16 and 17, each	41 12 3	c.i.f. Calcutta.
2. Solebar stiffening brackets, each .	3 7 0	f.o.r. Tatanagar.
3. Brake blocks and cylinder carrier packing blocks, per cwt. . .	7 12 0	(From Calmoni Fngineering Company.)

The prices for the last item, which are now being paid, are Rs. 5-8-0 and Rs. 7-0-0 per cwt. respectively, the latter having the necessary holes drilled.

Please let us know if there is any other item of information that you desire.

(5) *Letter from the Peninsular Locomotive Company, Limited, dated 25th May 1926, giving replies to questionnaire regarding wagons and locomotives.*

We beg to acknowledge your questionnaire for wagon-cum-locomotive builders on the matter of steel castings and spring steel.

(1) A list of steel castings going into 2-8-0 type of locomotive and tender is appended herewith. Messrs. Hukumchand Electric Steel Works have written to us that they have made various locomotive parts for the North Western Railway, East Indian Railway, Great Indian Peninsula, Darjeeling-Himalayan Railway, Eastern Bengal Railway and Bengal Nagpur Railway. We were also informed that some of these railways had decided thereafter not to order these parts out from England. We are looking forward to considerable co-operation with them in future for steel castings going into locomotives.

(2) We have not in our hands the drawings of all types of locomotives used by Indian railways. When they emanate from different manufacturers, there are usually small details of design which vary. We think that the castings, which will be most likely useful in more than one type, would be those affecting the tender. Also where Driving, Leading and Training Wheels are of the same diameter the wheel centres in most cases will be interchangeable, and if the wheel centres are interchangeable the hornblocks and axle-boxes would also be. We would refer the Tariff Board to the several reports of the I. R. C. A. Committee on standardization, which, we presume, would contain useful information on the subject. Unfortunately we have not ourselves got any of these reports, which are kept confidential.

(3) (*a*) We do not know whether there is any inherent difficulty in the process of manufacture or in obtaining raw material, which would prevent the economic production of steel castings in India. We understand that steel castings have been made by the Bombay, Baroda and Central India in Bombay and by the East Indian Railway at Jamalpur for many years. Whether this production was economic or not it is for the Tariff Board to ascertain by getting castings from these places.

(*b*) We are not aware that springs steel is manufactured in India.

(4) The total weight of steel castings in the 2-8-0 locomotive and tender is 16·05 tons. The steel springs on the locomotive are Main Bearing Springs (laminated), Tender Bearing Springs (laminated), Helical Springs for Draw Gear, etc. The total weight of springs on the 2-8-0 type locomotive and tender is 2·34 tons.

(5) and (6) We cannot give you any particulars of steel castings or spring steel used by us since 1922-23 as we have not been successful in our efforts to secure locomotive orders from the Railway Board and the locomotive section of this Company's works has been at a standstill since.

(7) (*a*) We have put the capacity of our works for the manufacture of locomotives at two hundred. But in practice for the next year or two we do not expect to average more than one hundred locomotives a year. It will not, therefore, pay us to put down a steel casting plant at our works.

(*b*) We are unable to give the information.

(8) In our wagon section we purchased from the Hukumchand Electric Steel Works solebar stiffening brackets, which are duly passed by the inspecting staff and accepted by the railways. We have no reason to complain of the quality.

(9) With this firm, apart from placing orders for solebar stiffening brackets, we made enquiries about axle-boxes, but found that the quotation for axle-boxes was very far out. The price quoted by them was Rs. 30 f.o.r. Calcutta whereas the price that we actually paid was Rs. 41-12-3 c.i.f. Calcutta for the finished article, *i.e.*, axle-boxes with bronze bearing, etc., complete. We had to place the initial orders in a great hurry and were not in a position to spend any time in negotiations.

The other reason was that this firm had not manufactured axle-boxes for any other wagon manufacturer and as we were new in the field of wagon

building, we did not want to take the risk. Also they desired to give only the unfinished casting whereas the English manufacturer of axle-boxes offered axle-boxes with bronze bearings, etc., complete. The following extracts from the letter of our agent in London would be read with interest:—

> " As regards axle-boxes the Hukumchand Electric Steel Company quote Rs. 120 per set of four for machined castings but without brasses and accessories; this at 1*s.* 6*d.* per rupee works out at £9 while similarly finished boxes can be supplied from here for about £6-10-0 per set of four."

Enclosure.

Schedule of steel castings on 2-8-0 type locomotive and tender.

1 Fire Door.
1 Frame Hind Drag Casting.
1 Frame Stretcher (Leading and Inter).
1 Frame Stretcher (Inter).
8 Horn Plate Clips.
1 Frame Stretcher (Front of Firebox).
2 Slide Bar Brackets.
4 Platform Supports.
2 Piston Body.
2 R. H. and 2 L. H. Reversing Link Carriers.
2 Wheel Centres (Driving).
4 Wheel Centres (Leading and Trailing).
2 Wheel Centres (Intermediate).
6 Axle-boxes (2 L. 2 D. and 2 T.).
2 R. H. and L. H. Hornblocks.
8 Axle-box Guides.
2 Spring Beam Carriers.
2 Spring Beam Carriers.
6 Brackets for Springs.
1 Cross Stretcher between Frames of Truck.
2 Bogie Wheel Centres.
1 Pony Truck Axle-box.
1 Pivot of Radial Arm (Pony Truck).
1 Front Drag Box Casting.
6 Tender Wheel Centres.
4 Tank Supports.
4 Fuel Pack Supports.
1 Drawhook Guide.

(6) *Letter from the Peninsular Locomotive Company, Limited, dated the 6th July 1926.*

Re. *Wagon costs.*

Referring to your letter No. 293, dated 25th May 1926, we beg to send you herewith a statement of cost of wagons in the form desired by you, giving the Works cost of materials, cost above materials and the overhead charges separately per wagon.

We are sorry we are not able to give information of any previous years as this is the first year of the Company's output.

The total cost as on the 30th April 1926 per wagon appears to be heavy, probably because some of the items, whose life would be extended over a longer period, have been included in the twelve months ending 30th April 1926. There is reason to believe that under the heading of belting and tools this has occurred.

The orders for some of the materials were placed in the first instance in a great hurry as early delivery had been promised by us. But the delay in completing the erection of the Works from where it was left when negotiations broke off with the Railway Board in 1922 prevented the actual output of wagons at the date expected. In order, however, to start the work, such work as was possible was undertaken by the Works Manager and on this work naturally the incidence of all charges, both of the Works and outside, was heavy.

A more correct appreciation of the situation would be found from the second column, which represents the costs as they are expected to be in the future. This is, however, on the basis that the Works would produce one thousand wagons. It may be noted that the maximum production per month so far has not exceeded seventy-two, *i.e.*, eight hundred and sixty-four wagons per year. If the output be, therefore, taken to be a thousand wagons per year some of the charges would have to be raised by fifteen per cent.

Until the locomotive policy of the Government is more definitely fixed, it has been necessary to reckon depreciation and other charges on the wagon output alone. When this policy is fixed, it is quite possible that the block account of the Company may have a more direct relation to the total output in value and the incidence of depreciation and other charges would be lower.

Any explanations that you desire in this connection we shall be very glad to send.

In conclusion we have to request that these figures may be treated as Confidential. They have been made available to the Tariff Board for what they are worth because of our desire to place all that we are asked to place before them to help the enquiry.

Enclosure.

	Actual up to 30th April 1926.	As it should be in future.
	Rs. A. P.	Rs. A. P.
I. Works Cost.		
1. Materials—		
Indian steel—		
Plates, sheets, Channels, Flats, Billets, etc., supplied by Tata Iron and Steel Company, Limited	1,046 3 5	990 0 0
Imported Continental Steel—	*Nil.*	*Nil.*
Castings—		
Indian—		
Brake Blocks and Cylinder Carrier Packing Blocks (cast iron) supplied by Calmoni Engineering Company	9 14 3	9 14 3
Cast Steel Solebar Stiffening Brackets supplied by Hukumchand Electric Steel Works	15 0 0	15 0 0
Fittings—		
Trimmings, etc, supplied by Sub-Contractor, ready for fitting to wagons	230 13 3	265 0 0
Materials purchased outside India	1,179 2 3	979 0 0
Items marked "X" received only for the first 100 wagon sets, the balance being made at Tatanagar	376 10 8	...
Other Materials—		
Paints and Linseed Oil	21 12 0	21 12 0
Stores	48 12 0	48 12 0
Total	2,928 3 10	2,329 6 3
2. Cost above Materials—		
Power including fuel, Belting, Tools, Sundry Works and Expenses	510 7 2	153 15 9
Machinery Repairs Water Land Lighting Motor Car Local Charges	331 0 0	94 0 0
Supervision—		
European	293 0 0	84 0 0
Labour	411 8 0	365 0 0
Total Works Cost	4,474 3 0	3,026 6 0

	Actual up to 20th April 1926.			As it should be in future.		
	Rs.	A.	P.	Rs.	A.	P.
II. Overhead Charges—						
Depreciation	422	0	0	121	0	0
Interest	522	6	0	150	0	0
Head Office Charges—						
Auditor's Fees						
Stationery						
Post and Telegrams						
Banker's Charges						
Travelling Expenses	302	0	0	86	0	0
Direction						
Office accounts, estimate, etc.						
Sundry expenses						
Insurance						
GRAND TOTAL	5,720	3	0	3,383	6	0

(7) *Letter from the Peninsular Locomotive Company, Limited, dated the 7th July 1926.*

Further to our letter, dated 25th May 1926, we beg to send you herewith a list of steel castings required for locomotives, locomotive tender and bogie carriage underframes. We also send full list of weights of spring steel required for 2-6-4 superheater tank engine, locomotive tenders and bogie carriage underframes as well as four-wheel covered goods wagons. We trust these will be useful to the Board.

We give below, detailed lists of steel castings with their respective weights for typical locomotives, carriages and wagons.

(*a*) *Steel castings for a 2-6-4 superheated tank engine, 5′ 6″ gauge.*

	T.	C.	Q.	Lb.
2 Driving Wheel Centres	1	11	2	5
4 Leaving and Trailing Wheel Centres	2	12	3	0
6 Bogie Wheel Centres	1	11	0	11
	5	15	1	16

Locomotive general castings having wearing surfaces.

	T.	C.	Q.	Lb.
1 Inside Motion Stretcher	0	8	1	17
2 Bogie Axle-box Guides	0	1	2	6
2 Bogie Axle-box Guides	0	1	2	6
2 Bogie Axle-box Guides	0	1	1	23
2 Bogie Axle-box Guides	0	1	1	23
1 Radial Axle-box	0	8	1	17
4 Bogie Axle-boxes	0	4	2	14
1 Drawbar Guide	0	0	1	15
1 Bogie Centre Casting	0	4	2	15
2 Bogie Frame Stretchers	0	9	3	9
1 Radial Side Spring Bracket	0	0	2	5
1 Radial Side Spring Guide	0	0	2	3
2 Axle-box Guides, L. & D. 2 Axle-box Guides, L. & D.	0	11	0	0
1 Axle-box Guides, T. 1 Axle-box Guides, T.	0	1	3	25
1 Axle-box Guides, T. 1 Axle-box Guides, T.	0	1	3	13
6 Coupled Axle-boxes	0	11	3	15
	3	10	0	0

2. *Locomotive general castings without wearing surfaces.*

	T.	C.	Q.	Lb.
1 Firedoor Deflector	0	0	1	4
1 Firedoor Handle	0	0	0	9
1 Frame Stay Front of Firebox	0	4	0	21
4 Piston Valve Heads	0	0	3	4
12 Coupled Spring Link Brackets	0	2	2	21
6 Axle-box Guide Clips	0	2	1	20
	0	10	1	23
Total weight of steel castings for (one engine)	9	15	3	11

Steel castings for 5′ 6″ gauge locomotive tender, having wearing surface.

	T.	C.	Q.	Lb.
1 Drawbar Guide	0	0	0	25
2 Drawbar Washers	0	0	0	25
1 Drawbar Front Distance Piece	0	0	1	26
2 Intermediate Buffer Guides	0	0	1	8

Steel castings without wearing surface.

	T.	C.	Q.	Lb.
1 Front Drag Casting	0	16	0	27
4 Fuel Drag Plate Stays	0	1	2	21
6 Wheel Centres	1	12	1	25
TOTAL	2	11	1	25

3. *Steel castings for bogie carriage underframes, 10′ 0° wheel base of bogie*

Castings with wearing surfaces.

	T.	C.	Q.	Lb.
4 Underframe Radial Castings	0	1	0	24
4 Bogie Radial Castings	0	1	0	24
2 Underframe Pivot Castings	0	1	2	22
2 Bogie Pivot Castings	0	1	1	6
4 Bolster Top Spring Bearings	0	2	1	4
4 Bolster Bottom Spring Bearings	0	2	0	0
4 Bolster End Spring Bearings	0	1	0	0
8 Rubbing Blocks	0	2	1	7
8 Axle-boxes	0	6	6	0

Castings without wearing surfaces.

	T.	C.	Q.	Lb.
4 Bolster Hanger Guide Brackets . .	0	2	1	0
16 Bearing Spring Brackets . . .	0	2	0	0
4 Queen Posts	0	2	0	0
TOTAL	1	5	1	3

Steel Castings for 4-wheel covered goods wagons, 5' 6" gauge.

	T.	C.	Q.	Lb.
4 Axle-boxes (castings with wearing surfaces)	0	2	2	4

You will notice that we omit from our list of castings for the carriages and wagons the items, buffers and wheel centres, as the former are usually now solid forged of weldless steel and the wheel centres are supplied by the Indian Railways themselves as separate indents, distinct from the contracts for carriages and wagons.

4. *Detailed list of Spring Steel required for the construction of a 2-6-4 superheated Tank Engine, 5' 6" gauge.*

	T.	C.	Q.	Lb.
2 Radial Leading Springs	0	2	3	24
2 Radial Check Springs	0	0	1	8
6 Coupled Wheel Bearing Springs . .	0	15	3	22
2 Trailing Bogie Bearing Springs . .	0	7	3	24
2 Trailing Bogie Side Check Springs .	0	0	1	20
2 Brake Check Springs	0	0	0	8
1 Cab Seat Spring	0	0	0	½
2 Volute Draw Springs	0	0	3	2
4 Volute Buffer Springs	1	1	3	12
2 Safety Valve Springs	0	0	0	14
2 Whistle Springs	0	0	0	½
4 Cylinder Relief Springs	0	0	0	½
Ashpan and Smokebox Door Clamp Springs	0	0	0	½
4 Buffer Recoil Springs	0	0	0	18
TOTAL .	1	10	2	14

Detailed list of Spring Steel required for the construction of the Loco. Tender for 5' 6" gauge engines.

	T.	C.	Q.	Lb.
6 Bearing Springs	0	10	1	22
1 Intermediate Draw Spring . . .	0	1	3	4
TOTAL .	0	12	0	26

Detailed list of Spring Steel required for the construction of a Bogie Carriage Underframe.

	T.	C.	Q.	Lb.
8 Bearing Springs	0	17	0	0
8 Draw and Buffing Springs (strong)	0	2	2	24
4 Buffer Springs (weak)	0	1	1	3
4 Buffer Recoil Springs	0	0	0	18
4 Bolster Springs	1	1	2	8
3 Bolster Springs	0	2	2	6
16 Auxiliary Bearing Springs	0	1	3	24
4 Safety Chain Springs	0	0	1	8
8 Bolster End Check Springs	0	0	0	22
TOTAL	1	7	3	1

Detailed list of Spring Steel required for the construction of one 4-wheel covered goods wagon, 5' 6" gauge.

	T.	C.	Q.	Lb.
4 Bearing Springs	0	7	2	8
12 Draw and Buffing Springs	0	4	0	8
4 Buffer Recoil Springs	0	0	0	18
4 Safety Chain Springs	0	0	1	8
2 Door Arrester Springs	0	0	0	16
TOTAL	0	12	1	2

All the above quantities and weights are per Vehicle Set and we trust will give you the required information on the subject.

(8) *Letter from the Peninsular Locomotive Company, Limited, dated the 20th July 1926.*

Further to our letter, dated 8th instant, we beg to send you herewith a copy of a preliminary report prepared for us by Mr. R. Wright in his capacity as Consulting Engineer. We are sending this to you as we have received it, but we may say that Mr. Wright has not been at the Works for over two years and that he saw the Works where the erection was left off in 1922 with buildings incomplete and part of the machinery lying in the United Kingdom unshipped and some of it in cases unopened.

We have asked him to finish this report after full inspection of the Works as they are now, but, as that would involve delay in sending these papers to you, he has sent this preliminary report from Simla and will probably submit a supplementary note, which we shall make available to you.

Mr. Wright has also undertaken to be present at the time of the enquiry in order to further explain any points arising out of the memorandum submitted by the Company or the report, which he has prepared for us.

The particulars, which we were going to receive from London, have been made available to Mr. Wright and have been already embodied by him in paragraph 21.

We shall be obliged if you will now fix a date for oral examination convenient to the Board.

Enclosure.

Simla, the 17th July 1926.

To

The Peninsular Locomotive Company.

Bombay.

GENTLEMEN,

In response to your request that I should examine the possibilities of locomotive construction in India and give you my opinion as to the prospects of your Company being able to start such an industry in your Works at Tatanagar, with any hope of eventual commercial success, and further as to what measure of temporary assistance it would be necessary to secure from the Government of India to tide over the difficult years immediately following the actual commencement of locomotive construction, I have carefully studied the problem from the point at which it was left when the Tariff Board issued their second report in March 1924, and have also had an opportunity during the last four years of gaining an intimate knowledge of the actual conditions in the Railway Workshops and industrial centres of India.

2. I might remark that my whole life has been connected with the manufacture and working of locomotives, from the time when I served my apprenticeship in the English works of Messrs. Beyer Peacock and Company of Manchester, the well-known locomotive builders, and afterwards in periods of employment in the workshops of the Grant Trunk Railway of Canada, the drawing office of the Vulcan Locomotive Works at Newton-le-Willows, Lancashire, for nearly nine years as an officer in the Locomotive and Carriage Departments of the Indian State Railways, and finally 20 years of active Locomotive manufacture with the old established firm of Nasmyth Wilson and Company, Patricroft, having been a Joint Managing Director of this Company for several years prior to my recent retirement in order to take up private practice as a Consulting Engineer.

3. There is not the slightest doubt in my mind as to the great possibilities of successful locomotive manufacture in this country, and as a matter of fact locomotives have been constructed on a small scale in the Ajmer Workshops of Bombay, Baroda and Central India Railway for more than 25 years and most of the component parts are being daily turned out with mechanical success from the various railway workshops all over India.

4. The Bombay, Baroda and Central India Railway claim and have done for many years that the cost of locomotive building at their Ajmer Works is considerably less than the rates at which they would otherwise have to pay for imported locomotives and tenders, and the fact that they have for so many years continued the practice, and developed their shops until they can this year and for the next few years commence a programme of 25 new locomotives per annum shews that they have the courage of their convictions.

5. Sir Vincent Raven in his recent report of the State Railways Workshops Committee, states that the Railway Workshops "manufacture all their requirements" of locomotive parts for purposes of repair and renewal, and recommends the continuance of such procedure, as he is of opinion that such work can be done at rates which are less than it would cost the Government to purchase from outside sources."

6. To a business man, with a mind trained on commercial mechanical lines, both these opinions appear equally fallacious, on the point of cost, although from questions of convenience there are no doubt many advantages to be obtained by such procedure. But the entire absence of any system of real costing in the Railway workshops of India, evidence of which is fully contained in Sir Vincent Raven's report, indicates in a marked degree that no Railway in India has the slightest idea that what the various products of their workshops really do cost them, nor have they any data as to their actual overhead charges or on-costs of such workshops, without which no costs of production can possibly be of any value.

7. We can, however, draw the sound conclusion, from what is actually produced in the Railway Workshops of India, that the manufacture of locomotives is a possible and feasible project in this country and that there does exist in India all the elements from which a successful locomotive manufacturing industry can be built up. In fact the labour element is here and in abundance, and is quite capable of being trained for the work, and in addition there exists now a reasonable supply of fully trained labour in all those branches of the engineering trades from which the nucleus of an industry such as you have in mind can be evolved.

8. All that is required is the supervising staff and the organisation of your Works at Tatanagar on sound commercial lines for the very specialized trade of locomotive construction.

9. As regards the raw materials, *i.e.*, materials which are raw to the locomotive trade but finished products of some other industry, these exist in India to a very considerable extent, but such items as it would be necessary to import from overseas, may be briefly listed as follows:—

(*a*) Steel Boiler Plates.—Under the specification to which locomotives for the Government of India are constructed, Acid Steel plates must be used for the boilers. Many countries use a boiler plate of basic steel, so that if this requirement were modified by the Consulting Engineers, it might be possible at some later date to obtain such basic steel plates in India. For the present however, all boiler plates must be obtained from overseas.

(*b*) Copper firebox plates and rods.

(*c*) Boiler tubes, either steel, copper or brass.

(*d*) Tyres.

(*e*) Axles.

(*f*) Certain classes of steel blooms and slabs and rolled bars.

(*g*) Various small fittings of a specialized character.

10. The locomotive with its tender consists of 7 main parts.

A. The Boiler or steam producer.

B. The Engine which provides the motive power.

C. The Frame or chassis, which carries the boiler and also has the engine attached to it.

D. The Wheels which enable the locomotive to move on receiving their impetus from the engine.

E. The Cab with its operating mechanisms.

F. The Tender which is simply a wagon attached to the locomotive to carry its store of fuel and water.

G. Sundry Items connecting all these various parts but chiefly consisting of piping of various kinds.

11. Taking these items *seriatim* let us examine which parts can be made in India, and how much material it will be necessary to import.

A. It would in the early stages be advisable to import the boiler complete, with all its fittings, tubes, Superheater elements and header, including the safety valves. When the projected boiler shop at your Works is constructed, it would only be necessary to import the acid steel plates, but as the boilershop is a self-contained unit, it might be as well to leave this department out in the initial stages and to build and equip it when the plant you already have built is in full working order. You can however, with your present plant, and with Indian material, supply the steel clothing sheets with which the boiler is covered, as well as the ashpan, firebars and their actuating gears.

B. The cylinders of cast iron, and the motion work of steel with their gunmetal bearing, can all be manufactured in India. The only import here being certain qualities of steel blooms from which the motion parts would be forged.

C. The frame of steel plates, held together with cast steel stretchers, and provided with axleboxes and axlebox slides, etc., can all be manufactured in India from material produced in the country. Only the bearing springs and vacuum brake details would need to come from overseas.

D. Although the cast steel wheel centres could be made in India, the special steel tyres and axles would have to be imported, so that at the commencement I should recommend that wheels and axleboxes came out finished complete, as in the case of wagon construction in India.

E. The cab would be manufactured here from local material, but the bulk of the small fittings contained therein would be more cheaply and expeditiously purchased from various makers overseas who specialise in such items, as is usually done by locomotive builders overseas.

F. The tender could be manufactured here complete, from local material except for the wheels and axles and vacuum brake fittings.

G. These consist chiefly of steel, copper and rubber piping, all of which would be obtained from overseas.

12. The present is an opportune moment to commence locomotive manufacture in this country, as the Railway Board have decided to adopt Standard Locomotives as recommended by the Locomotive Standards Committee, and to refuse to sanction the purchase of locomotive by any of the Indian Railways over whom they have control, unless they conform in every detail to the approved designs.

The standard locomotives selected are as follows:—

Axle Load.				Type.
12·5 tons 5′ 6″ gauge	1	4-6-2 type Branch cyls.	17½″×26″	XA
17·	2	4-6-2 „ Light „	22½″×26″	XB
19·5	3	4-6-2 „ Heavy „	23″×28″	XC
17·	4	2-8-2 „ Light „	22½″×28″	XD
22·5	5	2-8-2 „ Heavy „	23½″×28″	XE
10 Metre Gauge	1	4-6-2 „ Light „	15″×24″	YB
12	2	4-6-2 „ Heavy „	17″×24″	YC
10	3	2-8-2 „ Light „	16½″×24″	YD

These 8 types of locomotives comprise all the engines which will be permitted to be purchased for 5′ 6″ and metre gauge railways of India for the future except with the Railway Board's permission for engines of any particular special type such as perhaps Mallet or Garret locomotives for experimental purposes.

As the drawings are not available for these 8 types in India at the moment, it is difficult to consider their design in detail if not impossible.

The writer has, however, been connected with design, construction and tests, of two types of metre gauge locomotives which conform very closely to the No. 3 metre gauge standard, or 2-8-2 Light Mikado type, and can therefore give the figures for the weights of material used in their construction, and costs of production very closely.

As moreover this particular design, would, on account of its light weight (when compared with the heavier 5′ 6″ gauge locomotives) form a very suitable class of locomotive for your new works to commence operations on, I will take it as an example and to proceed to analyse the material used in its construction.

13. Approximately at the present moment the actual cost of such a locomotive in any of the British Locomotive Works would be as follows:—

	£	s.	d.	
Materials for 1 engine and tender .	2,640	0	0	33%
Wages directly booked to the Job .	1,530	0	0	20%
On-costs at 160 per cent. on direct wages	2,448	0	0	31%
Total Works cost .	6,618	0	0	
Profit at 10 per cent. . . .	661	16	0	8%
Delivery f.o.b. on 68½ tons . .	162	0	0	2%
Freight and insurance to India .	498	4	0	6%
Total cost delivered c.i.f. India .	7,940	0	0	100%

14. Such would be a reasonable price for such a locomotive, but unfortunately for the last four years, trade conditions have been such that I can state with assurance that the profit has been practically unknown in the locomotive trade of Great Britain during this period and makers have been chiefly concerned to ascertain what percentage of their on-costs they could waive, in preference to closing their works together. There is a point where it is a better policy to shut up the works. Probably no orders taken during this period have covered more than 60 per cent. of the real on-cost charges.

Tenders are now being called for in England for all of these new types of Indian locomotives, and I should be very surprised if the State Railways paid more than £5,400 each for locomotives of this particular type, and probably even less.

But such an offer is no indication that it is at this figure that British builders can really supply such an engine. It is simply a freak price due to the exceptional conditions of trade now ruling, and that have been ruling for four years past.

The moment trade revives and there is enough work to fill up the various overseas locomotive builders, prices will at once jump to their proper level.

This, however, is only one of the perils which a new industry in this country needs to be protected against.

15. I can now proceed to the analysis referred to in paragraph 12.

This new Standard I. S. R. Metre Gauge Mikado Locomotive and Tender Type YD on the Metre Gauge list quoted in paragraph 12 will weigh as follows:—

In full working order ready to haul its train.

	Tons.
Engine	57½
Tender	35¾
TOTAL	93¼

Actual weight of engine and tender, empty, *i.e.*, without water or fuel in engine or in the tender.

	Tons.
Engine	51½
Tender	15¼
TOTAL	66¾

But in order to manufacture such a locomotive and tender considerably more than this 66¾ tons of material are used, and the actual weight of raw material purchased for the construction of this locomotive and tender may be tabulated as follows:—

A. The Boiler—

	Cwts.
Steel plates, acid boiler quality	142
,, ,, for smoke box	18
,, ,, for ashpan	12
,, sheets for clothing	17
,, angles and tees	8
,, rivets	9½
,, tubes, smoke and flue	39
,, elements, superheater	16
,, bar for slingstays and stavings	24¼
,, bar for fire bars	4
,, forgings	14
Yorkshire iron	3¾
Copper firebox plates	35
Copper rods	14
,, rivets	4¾
,, washers	3¾
Gunmetal for boiler mountings	12
Cast iron for regulator, header and chimney	15
,, ,, for firebars rocking grate	18
TOTAL	20¼ tons.

B. The Engine—

	Cwts.
Iron castings for cylinders and covers	78
Forgings direct from hammer	51
Smithy forgings	6
Gunmetal	12
TOTAL	7¼ tons.

C. The Frame—

	Cwts.
Steel frame plates	95
,, plates other than frame	45
,, angles, channels and tees	14
,, rivets	8
Steel castings	135
Iron ,,	62
Gunmetal	14
White metal	2
Steel springs (bought overseas)	20
TOTAL	19¾ tons.

D. The Wheels—

	Cwts.
Cast steel	95
Rolled steel tyres	54
Forged steel axles	27
Steel forgings	9
TOTAL	9¼ tons.

E. The Cab—

	Cwts.
Steel sheets	25
,, angles, tees and beadings	9
Steel forgings	14
Gunmetal for special fittings, etc.	12
Timber	10
TOTAL	3½ tons.

F. The Tender—

	Cwts.
Steel channels	20¼
,, plates over ¼" thick	100
,, ,, under ¼" ,,	28½
,, angles and tees	24¼
,, rivets	8¼
,, bars and beading	3
,, castings for wheels	16¼
,, ,, remainder	23
,, tyres	22
,, axles	15
,, springs	7
,, forgings, direct	2
,, ,, smithy	21
,, bar	6
Iron castings	15
Gunmetal	2½
Copper pipes	3
Turned bolts	1½
Timber	8¼
TOTAL	16¼ tons.

G. Sundry Items connecting A, B, C, D, E, & F—

	Cwts.
Steel piping	10
,, forgings	12
Copper piping	5
Rubber hose	1
Cast Iron	2
TOTAL	1½ tons.

It will thus be seen that to manufacture a locomotive which weighs when completed 51½ tons, it is necessary to purchase 61¾ tons of material and for the tender weighing 15¼ tons, some 16¼ tons of material are required. The tender being fabricated chiefly out of plates with much less percentage of machine work employed in its manufacture only produces some 20 cwts. of scrap, against the 10½ tons in the case of the locomotive.

16. It will now be possible to get some idea of the effect of the Indian Tariff in the purchase of the material for this locomotive.

A. The Boiler.—This, it is proposed, should be purchased complete from overseas for the present.

The weight of this boiler as shipped will be some 16¼ tons, and a reasonable price delivered c.i.f. Indian port including a 10 per cent. profit to the makers in England would be approximately £1,815.

If one of the Indian railways were purchasing this boiler in the open market, its price would no doubt be considerably less as there would be keen competition to secure an order for a number of boilers of this description, but your company would probably get no offers, as the British builders would soon ascertain that the order was part of a scheme for locomotive building in India,

and it would not be unnatural were they unwilling to help to sharpen the knife which would eventually be used to cut their own throats with.

The boilers would thus fall to be manufactured by Kerr Stuart and Company and they could not be expected to build them at a loss, and a reasonable profit of 10 per cent. or £150 per boiler would be their just due.

In addition to this amount there would be a duty amounting to some Rs. 608 *plus* a landing charge and freight from Calcutta to Tatanagar of Rs. 1,025.

The various special boiler mountings can be purchased from the various makers on equal terms with the British builders, so we need add only the Indian duty *plus* railway freight to the c.i.f. rates to arrive at the extra cost to your company.

	£	s.	d.	
Two injectors at	29	0	0	
Two water gauges	8	10	0	
Two pressure gauges	3	0	0	
One sight feed lubricator (or mechanical)	67	0	0	
Asbestos packed cocks (2)	6	10	0	
2 safety valves	18	0	0	
2 blow off cocks	8	10	0	
Sanding gear	22	0	0	
Boiler cleaner	85	0	0	
Asbestos mattress	72	0	0	
Vacuum brake	110	0	0	(We might add this here as part goes on to the Boiler.)
Electric head lights, etc.	85	0	0	
	514	10	0	

The duty and railway freight on all these fittings would come to Rs. 320.

We might as well finish off the material imported from overseas here and the next item is in *B. The Engine.*

This comprises some 57 cwts. of special steel blooms and slabs value £42. Here the duty and railway freight would come to Rs. 195.

In *C. The Frame* the only item is springs of which there are 20 cwts. costing £70. Duty and railway freight account for Rs. 140.

D. The Wheels.—I should recommend the whole of these being bought overseas complete and ready to put on the engine, and I will include the tender wheels with the engine wheels.

The cost per set E and T would be £580 f.o.b. or £620 c.i.f. and the same remark applies here as in the case of the boiler so we must include a 10 per cent. profit or say £50 *plus* a duty and railway freight of Rs. 810.

E. The Cab.—We have dealt with the special fittings included in this item under the boiler mountings.

F. The Tender.—Here we only have the springs to import and the central draft gear, which is a patent fitting, so we will include both engine and tender draft gears.

The tender springs weigh 7 cwts. and cost £24, and the duty and railway freight come to Rs. 24.

The two sets of buffing and draw gear cost £80 and duty and railway freight come to Rs. 76.

G. Sundry Items.—Imported material under this heading is so small that it can be ignored.

17. The items in paragraph 16 account for some 34¼ tons, leaving 43¼ tons of Indian material to consider as to how the Indian Tariff affects its cost.

English Cost. £		Indian Cost. £
152	Steel plates 16 tons	180
33	,, bar angles, channels and tees 3½ tons	40
36	,, for forgings, 3 tons	48
12	,, for rivets ¾ ton	15
256	Cast steel 8 tons	330
57	,, iron 8¾ tons	92
165	Gunmetal 1½ tons	210
15	Timber ¾ ton	10
60	Copper ½ ton	70
11	Piping ½ ton	14
797		1,009

The cost of this 43¼ tons of material to a British locomotive builder would be £797, whereas your Company would have to pay the equivalent of £1,009, so there is a sum of £212 against the Indian Manufacturer.

This added to the amount of £440 which the imported parts specified in paragraph 16 would cost your Company in excess of prices at which the British makers would pay, makes a debit in respect of material alone to the extent of £652 against your Company on the particular type of locomotive we have been considering.

18. On the question of wages the following is a list of the direct wages which would be paid out for this metre gauge Mikado Locomotive.

	Locomotive. £	Tender. £
Moulding	64	4
Core making	27	2
Fettling	16	1
Casehardening	5	1
Forging	48	2
Smithing	132	20
Boilermaking	162	78
Machineworkers	478	65
Fitting	310	48
Coppersmiths	22	1
Joiners	5	5
Packers	8	1
Painters	24	1
	1,301	229
TOTAL		£1,530

All these classes of labour are available in India, but as you have as yet no foundry or boiler shops, the Moulding, Coremaking and Fettling will not apply in your case, and your boilermaking will be confined to the tender as the same class of men do both boilermaking and tank work.

On the whole I should take it that your actual direct wages will be no more than in the case of a British workshop, and in certain classes of machine work will be considerably less, as in the simpler machine operations the Indian workman will do the same amount of work as the European machine worker, but at a considerably less cost. The same remark applies to the boilermaker engaged on tender work. On actual boiler work I note in many works in India that whilst the Indian boilermaker has the necessary skill, yet on account of his physique and climate in which he works the operation takes longer, and negatives the lower wage of the Indian worker. Taking wages on the whole I should say that there will be an advantage to your Company over the overseas builders, which in the first stages will not shew themselves, and so can be ignored for the purposes of this report.

When however your works are fully launched on the construction of the new standard locomotives now being introduced into India, and you are gradually equipped with the special tools and jigs which continuous work of the few types of locomotives you will have to deal with will permit you to introduce, you will gradually see your direct wage bill reduce per engine, until from this point at any rate you will need no protection from the imported article, and when the men get used to their work, and properly supervised with piece work and bonus system to give them an interest in increasing their output, you will in the matter of direct labour be in a very pleasing position compared with the wages your overseas competitors will have to pay.

19. On the question of on-costs and overhead charges, there is no doubt that here you will be at considerable disadvantage compared with manufacturers overseas.

Your supervising staff and foremen, as well as a number of your leading hands (for the commencement at any rate) will have to be of European origin and trained in European workshops.

They will have to be paid at considerably higher rates than in the works from which they come, their passages out and home will have to be secured, and you will have to provide them with comfortable houses in which to reside, look after them in case of sickness, allow them a reasonable amount of leave each year, and generally make the posts attractive, in order to induce them to leave their present jobs.

All this means an expenditure no overseas manufacturer has to provide for.

Again your non-productive labour will have to be provided in considerably larger quantity than in England, where the physique of the ordinary works labourer is much greater than in this country.

At certain seasons of the year also, the general outturn of the works is liable to droop, and this is at once reflected in increased on-costs.

On-costs are naturally a subject on which all firms shew a large degree of reticence, but before the war in England many builders were working with "on-costs" of 85 per cent. to 95 per cent. of their direct wages.

Since the war these have risen to over 200 per cent. in many cases, but I should imagine that 160 per cent. was a fair average at the present time, and as trade revived in England the figure will be reduced.

In Sir Vincent Raven's report he mentions a figure of 200 per cent. as representing the on-costs of Indian Engineering works.

You yourself know what it works out to in your wagon building operations. It will be very considerably more when you start constructing loco-

motives. At any rate this is my opinion based on what happens in England, and it is obvious when you consider the class of tools with which wagons can be constructed, compared with the very expensive plant necessary to construct locomotives.

I should imagine therefore that to start with your on-costs will be in the neighbourhood of 250 per cent. gradually coming down *pari passu* with your direct wages, as your operations got into a state of smooth working order, and a steady progression of work coming through your shops.

In connection with this progression of work, it will be necessary for you to have a certain amount of work on spare parts for locomotive at the same time as orders for locomotives themselves, as these spare parts can be waved in with your locomotive manufacture, and form a very useful balance weight by filling in gaps when machines may otherwise be standing idle, due to the hitches which often occur in the progress of locomotive manufacture through the shops.

When you get your boilershop to work, you will find that there is plenty of business in duplicate boilers, and that the parts for such orders work in well with your ordinary locomotive business, on account of their "balance weight" action in reducing on-costs.

20. Let me now take the English cost given in paragraph 13, and try to compare it somewhat approximately with what your Indian costs are likely to be.

I am ignoring the methods of costing adopted in the case of your wagon building reports, in which you divide your expenses into 1. Materials, 2. Costs above materials, and 3. Overhead Charges.

This method does not really form a basis for locomotive costing and is not one to which I am accustomed, as the usual method is to divide wages into "Direct wages," *i.e.*, wages which can be booked on to a particular contract on which the man is working and indirect wages which cannot be booked to a particular job but are for the general benefit of the Works, and then to express "on-costs" in the terms of a ratio over the "direct wages."

Such a method of working out "on-costs" is shewn in Appendix I and is a copy of a method adopted in Engineering Works to obtain the on-costs for the month in the case of a Locomotive Builder with an output of some 50 locomotives per year.

An intimate knowledge of locomotive works practice induces a natural instinct in these matters of on-costs, and enables one to form ideas as to the comparative costs of running British as compared with Indian Works.

In Sir Vincent Raven's report he gives the average on-costs of private industrial works in India at about 200 per cent. and I am inclined to agree with this figure.

This you may say is mere generalization, but it is difficult to do more than this, as we have no data on which to take the costs of a locomotive item by item, and estimate the probable costs of manufacture. Also there is no connection between the costs of wagon building and locomotive construction.

Were you able to obtain data from the Ajmer Works where they have been building locomotives for the last 30 years, you might get some really precise figures, but unfortunately these are not available.

All I can suggest is that taking 200 per cent. as the Indian rate for workshops under commercial management, the difficulties attending the starting up of a new works would increase this figure to 250 per cent. and that you would gradually work this down to 200 per cent. and less as your efficiency grew, and this 250 per cent. is not to my mind an extravagant figure to assume for our present purpose.

Adjusting the figures from paragraph 13 we get—

	£	s.	d.
Materials for 1 engine and tender . . .	2,640	0	0
Add extra Indian cost from paragraph 17 . .	652	0	0
Production wages in India in ratio of British and Indian material (34¼ to 43¼) . . .	1,010	0	0
On-costs at 250 per cent. on direct wages . .	2,525	0	0
Production wages on British portion . .	520	0	0
On-costs at 160 per cent. on British wages . .	832	0	0
Total cost at Tatanagar .	8,179	0	0
Add your profit at say 7½ per cent. . . .	613	0	0
Sale price at Tatanagar .	8,792	0	0

But to make metre gauge locomotives at Tatanagar you would need to dismantle and pack just the same as the British makes do, unless you can obtain special broad gauge truck which would take them to their destination intact.

I should therefore add £200 to the above figure as the sale price delivered into trucks at Tatanagar or some £300 if you had to re-erect them at their destination, thus making the final price of this metre gauge engine £9,092-0-0.

On this basis you would need a protective tariff of 15 per cent. to protect you from a normal British quotation.

The trouble is that at the present time you will not be meeting normal British prices, as owing to the distressing circumstances now ruling in England, you will be meeting competition which includes no profit and only a portion of the on-costs.

Firms are now more concerned overseas in determining what percentage of their "on-costs," if waived, would not put them to less loss than closing their works altogether.

A shut works costs a great deal of money, until you put it into the receiver's hands, and we can take it roughly that you lose less by cutting out 40 per cent. of your on-costs than by closing your works.

Taking this figure you get £5,800 f.o.b. or £6,298 c.i.f. as the prices you will be up against at the present moment for the YD type metre gauge locomotive.

Even by almost eliminating your own profits you would then need a measure of protection of 33⅓ per cent. to make you safe.

This however is a state of affairs which cannot continue to any indefinite extent, as the balance sheets of the majority of British locomotive builders show, but the facts are here, and whilst you are establishing your own industry in India, temporary assistance is necessary to meet it, unless the Government of India are prepared to take these abnormal conditions into account, when deciding at what price they are prepared to place order with your Company.

21. Up to the present I have only considered the metre gauge locomotive but I now have before me the figures prepared by Messrs. Kerr Stuart in respect of one of the types of the new Standard Indian Locomotives, Type XD, in paragraph 12.

There is the 5′ 6″ gauge 2-8-2 Light Mikado Type, which is the counterpart of the metre gauge design of which you have details above.

I will compress the figures into the following tables:—

Actual cost of such a locomotive in an English Works.

	£	s.	d.	
Materials for 1 engine and tender	3,875	0	0	34%
Wages directly booked to the job	2,735	0	0	24%
On-costs at 120 per cent. (K. S. & Co.)	3,270	0	0	28%
Total works cost	9,879	0	0	
Profit at 7½ per cent.	740	0	0	6½%
Delivery f.o.b. on 117 tons	184	0	0	1½%
Freight £690 and Insurance £37	727	0	0	6%
Total c.i.f. India	11,480	0	0	100%

Weight of locomotive in full working order say—

	Tons.
Engine	94
Tender	58
TOTAL	152

Actual weight of engine and tender empty, *i.e.*, without water or fuel in engine or tender—

	Tons.
Engine	82
Tender	31½
TOTAL	113½

The total weight of material which it is necessary to purchase in order to construct this locomotive and tender comes to—

	Tons.
Engine	93½
Tender	35½
TOTAL	129½

This can be split up into the following materials:—

	Tons.
(*a*) Boiler plates, *plus* all internal boiler fittings	27½
(*b*) Iron castings	10½
(*c*) Steel castings	16½
(*d*) Steel plates (not boiler quality)	38½
(*e*) Steel forgings acid quality	15½
(*f*) Steel springs	2½
(*g*) Special brass fittings	3½
(*h*) Gunmetal and brass castings and copper tubes	2
(*i*) Steel tyres	7
(*j*) Steel axle forgings	6
	129½

Of these (*a*), (*e*), (*f*), (*g*), (*h*), (*i*) and (*j*) amounting to 64¼ tons would need to be imported for the present, leaving 65 tons of material per locomotive and tender which could be procured in India.

Working on these figures and assuming that the same extra cost per ton on British and Indian material applies to these 5′ 6″ gauge locomotives, as I worked out for the Metre Gauge Mikado type, we get the following prospective cost of manufacture in India:—

	£	s.	d.
Materials for 1 engine and tender . . .	3,875	0	0
Add extra Indian cost 64¼ tons at £12-6-0 per ton, 65 tons at £5 per ton	1,134	0	0
Production wages in India in ratio of British and Indian material	1,370	0	0
On-costs at 250 per cent. on these wages . .	3,425	0	0
	9,804	0	0
Add production wages in England . . .	1,364	0	0
Add British "on-costs" K. S. & Co. 120 per cent.	1,636	0	0
Total cost at Tatanagar .	12,804	0	0
Add your profit at 5 per cent. .	640	0	0
Sale price at Tatanagar .	13,444	0	0

This indicates that you would need a protective tariff of 20 per cent. to cover the rates at which imported locomotives could be bought in normal times, until your industry was established, and you brought your rate of on-costs down to the level they will be when you are working normally with a fully trained and organised staff.

To cover the abnormal prices now offered in England, *minus* profit and *minus* 40 per cent. of on-costs, which would bring the British price of this locomotive down to £9,442 c.i.f. Indian port or less, you would require some 33⅓ per cent. protection against this self-preservation dumping from England.

A good deal was said during the last tariff enquiry regarding "economic output" but no one seemed to know anything about this side of the proposition, and unfortunately it was the point which finally damned your case as far as I can read.

A figure of 200 is absurd.

I have been connected with a works for many years whose output was about 50 per year, but although profits fluctuated and we had our bad years periodically, good profits were to be obtained in normal years.

Let me put down roughly what the output of the various British locomotive builders (other than Kerr Stuart and Company) are:—

	Possible locomotives per annum.
1. The North British Locomotive Company, composed of the three firms of Neilson Reid and Company, Dubs and Company, Sharp Stewart and Company	600
2. The Vulcan Foundry	200
3. Beyer Peacock and Company	185
4. Kiston and Company	130
5. Stephenson and Company	75
6. Nasmyth Wilson and Company	50
7. Hawthrone Leslie and Company	50
8. Hunslet Engine Company	40
9. Bangnall and Company	35
10. Manning Wardle and Company	35
11. Avonside Engine Company	35
12. Peckett and Company	30

These are in terms of locomotives of reasonable size but no doubt some of them when turning out minute contractors or light railway engines increase their quantity but this almost toy locomotive construction is another story, and we are talking of locomotives such as India requires.

Added to these we have the after-war activities of Messrs. Armstrong Whitworth and Company and Messrs. Beardmore, and I should put down the former at 250 and the latter at 150, but all these firms whether the 200 per works of the North British Locomotive Company, of the 50 of Nasmyth Wilson and Company have been in the business for many years some of them like Stephenson and Company for nearly 100 years, and if their output had been uneconomic they would have faded away long since.

You can therefore put on one side all this talk of economic output, as if your works are well run, you can make a profit with 50 per annum and this is the figure I have in mind for your works gradually working up to 100 per annum.

22. I have examined your works at Tatanagar, and whilst I should not consider them as capable of constructing 200 locomotives per annum except on a basis of so much work being done in England that they were merely assembling sheds doing a minimum of work in the country, I do consider that you can develope them into an output of 50 per year, working up later on to 100 per annum.

They are suitable to enable you to book an order for locomotives at the present time, on the basis that you obtain the boiler, wheels and axles, and all special fittings and acid steel blooms from overseas and do over 50 per cent. of the work of locomotive construction in India.

However I will give you a fairly technical report of what you still require to commence production as and when I have paid further visit to Tatanagar.

23. What in my opinion should be your aim once you begin to get locomotive orders is to get your own boiler shop and iron and steel foundries, and be quite self-contained except for the minor specialities used in locomotive construction.

There is a large field in India for steel castings, and with a steady demand for such castings in your locomotive construction, you would be able to bring down your costs of such castings by supplying the requirements of the Indian railways, in this respect as a byeproduct whereas the only steel casting now running in this country has no steady output such as your locomotive activities would provide.

24. There is therefore to my mind no doubt of your ultimate success and the possibility of your being able to work on a profit producing basis. Your

troubles at the commencement are due to the abnormal and unproductive rates at which locomotives are being sold to-day all over the world. This leads the Indian Government to think that the prices they have been paying for locomotives the last few years as such as will continue, but the reverse is the case as unless conditions quickly change, the British locomotive industry will cease to exist.

It will be bankrupt, and many firms in Great Britain are fast drifting that way.

I have before me at this moment the report of the Directors of the largest locomotive works in Great Britain.

Their profit for the year is considerably less than the dividend they would ordinarily receive for their own investments.

The report contains these words "prices for contracts have been at an unremunerative level (through the year 1925) and this is reflected in the result of the trading as presented in the year's accounts."

A new Indian industry such as your should not be forced to compete against "such unremunerative prices" of locomotives.

In their last report the Tariff Board stated that your industry "has strong claims to temporary national assistance" and it is therefore not necessary to enlarge on this aspect of the case which was very fully and clearly put forward in your original application.

If therefore I can be of any assistance to you in your forthcoming application to the Tariff Board and explain any points in locomotive manufacture which may not be quite clear to the Board and on which you yourselves have no data, I shall be happy to do so.

APPENDIX I.

Sample of method of keeping month's On-Costs for a Works with output of some 50 locomotives per annum forming 75 per cent. of the total output.

Works expenses, Establishment.

	£ s. d.	£ s. d.
Wages non-productive	1,022 16 3	
„ shop tools and shop maintenance	203 16 2	
„ millwrights, electricians, etc.	149 19 7	
„ motor car's upkeep	12 12 9	
„ stables, „	19 12 7	
Fuel and Electricity—		
Fuel for generating steam and electricity	416 6 8	
Electricity from outside supply	155 7 6	
Other fuel costs (smithy forge, etc.)	552 6 8	
Oils, tool steel, steel small tools material	427 4 11	
Material for repairs	212 8 5	
„ „ shop tools and plant maintenance	82 3 11	
Material for motor car upkeep	3 17 9	
Material for stables upkeep	15 3 2	
Gas and water	48 5 2	
Cartage	18 18 4	
Depreciation, buildings, plant and Machinery Months' proportion	629 4 0	
Depreciation, Motor cars, etc.	20 0 0	
		3,390 3 10
Salaries of Directors, staff and Foremen	2,710 0 8	
Travelling expenses, Home	96 1 7	
„ „ Foreign	200 0 0	
Solicitors and Legal expenses	250 0 0	
Miscellaneous expenses	126 13 8	
Stationery and office expenses	65 17 5	
Advertising	36 7 9	
Rents	28 6 9	
Rates	238 17 10	
Property Tax	67 11 6	
Bank's Interest and Commission	186 19 0	
Fire and Boiler Insurance	45 9 0	
Employer's Liability Insurance	57 0 0	
National Insurance Scheme for Workmen	150 9 0	
Postage and Petty Cash	18 1 10	
Discount and Allowances	0 0 4	
Subscriptions to Charities, etc.	16 16 0	
		4,294 12 5
		8,284 16 3

Charges and Maintenance account for the month of *19* .

	£ s. d.	£ s. d.
Sale of Scrap arising out of Manufacture	496 0 7	
Scrap transferred to Iron Foundry	18 19 7	
„ „ „ Brass Foundry	176 19 10	
„ „ „ Forge	*nil*	
		692 0 0
Sundry receipts	55 17 9	
Discount and Allowances	*nil*	
		55 17 9
		747 17 9
Percentage for works expenses charged to works in progress, Smithy, Forge, Iron and Brass Foundry Accounts		6,189 6 8
Deficiency to Profit and Loss Account		1,347 11 10
Productive wages for month	4,525 0 7	
Total expenses	8,284 16 3	
Less receipts	747 17 9	
	7,586 18 6	
Percentage of expenses to Productive wages 166·5 per cent.		
Average percentage charge to Contract 136·7 per cent.		8,284 16 3

(9) *Letter from the Peninsular Locomotive Company, Limited, dated 9th August 1926.*

Further to our letter, dated 20th July 1926, we beg to send you herewith a supplementary note prepared for us by Mr. R. Wright, Consulting Engineer to our Company, which we would earnestly request the Board to take into full consideration when they are going into the question of locomotives.

Permit us to state that we share most of the views expressed in this note except, of course, any reflections on the Railway Board, which Mr. Wright can make as an independent party; but which it would not be correct for us to make as railway contractors.

Enclosure.

Calcutta, 8th August 1926.

MESSRS. THE PENINSULAR LOCOMOTIVE COMPANY, LIMITED.

GENTLEMEN,

Since writing my last report I have had an opportunity of going over your Works at Tatanagar and the progress made since my last visit more than two years ago is gratifying, although unfortunately the development has been solely in the direction of wagon building and no opportunity has yet been given you to commence locomotive construction. I would like however, to state the conclusions to which I have come as a result of this recent visit.

1. The ideal place for locomotive manufacture in India is at Tatanagar where your Works are located, on account of the facilities there for obtaining steel and the inevitable establishment of parallel industries in that neighbourhood in the future.

2. Your Works are located on a healthy spot higher than Jamshedpur itself, and, therefore, in suitable surroundings for your European staff, and yet close enough for them to obtain all the amenities of Jamshedpur itself.

3. If, therefore, Indian material is to be largely used in locomotive manufacture, the location at Tatanagar could not be improved upon.

4. Furthermore it is clear to me that if the locomotive industry is to be started in India, it cannot be put into being by an Indian Company working in isolation with no overseas connection. Under such conditions it would meet the fate of those numerous Indian enterprises, the limit of whose technical skill was confined to the small staff whom they were able to import. Quite a disproportionate amount of administrative and other work is thus thrown on the overseas staff, with the result that weaknesses from many causes creep into production and the industry languishes. From this point of view I regard your effort in the direction of manufacture of locomotives in India, as being very sound seeing that you are in direct and intimate business relationship with one of the locomotive manufacturers of the United Kingdom, on whom you can at a moment's notice call upon for material (either finished or raw), staff, patterns, drawings or any items required by the specifications to which you are working, and these can be supplied with none of the delays which the absence of any British connection would involve.

5. Another point, which I have carefully noted with regard to your Tatanagar Works, is that you are attempting to construct locomotives from the proper and from the Indian point of view, *i.e.*, in the assembling and erection, together with such work as can be done in India conveniently in the early stages, with regard to the skilled labour available and economically with regard to costs of production.

6. The manufacture of locomotives involves not one, but a dozen industries and trades all quite distinct from one another, and an attempt to start all these simultaneously by means of imported workmen and control would involve most arduous labour, and, if successful, would show costs quite out of proportion to the results obtained in other countries.

For instance, boilers will as a result of Sir Vincent Raven's recommendations shortly become an increasing item in the purchases of Indian Railways, as it is stated in that Report to be more economical to renew locomotive boilers after 16 years service rather than prolong their lives to twenty-five years as is done at present.

This points to a demand for duplicate boilers of almost twice the quantity imporetd at present, and whether you yourselves or some outside agency decides to attempt to cater for this growing need, there is no doubt that boilers will be required in such increasing quantities, when compared with the locomotive needs of India, that they form a separate chapter in themselves.

7. I regard the fact that you are not trying to manufacture the whole locomotive with your present equipment as the saving of your undertaking, because had you launched out on such a task with the very extensive equipment necessary, which would have to stand idle for a considerable period, I am quite sure that you would have been faced with insuperable financial difficulties until you eventually obtained orders from the Railway Board. If, however, the Railway Board for any reason delayed placing such orders with you, as has been the case, the large outlay necessary on a locomotive manufacturing plant would have strangled the Company long ago.

8. I have discussed the list of machinery, which you are prepared to install immediately a locomotive order is in sight and which will cost you between £20,000 and £25,000, and I am satisfied that with such additional equipment you could manufacture locally from Indian materials quite 20 per cent. of the locomotive and tender.

9. With these few additions your plant will comprise all the facilities requisite for erection and assembling of locomotives, as it is your erecting staff which you will need to train first. The simpler mechanical operations you can already carry out and the manufacture of the more difficult parts, as supplied to the erecting shop, will come later.

In your early stages I would suggest that you imported the frame plates fully machined, and with horn cheeks fitted, in fact just as they are delivered from the frame shop of an English works to the erecting shop.

The saddle casting, if of cast iron, could be made in India and machined in your Works. The cast steel frame stretchers could also be made and machined in India, with the possible exception of the large casting which in the new standard Indian designs, will support the firebox and connect the two portions of the frame itself, which is narrow in front of the firebox and widened at the rear.

The cylinders also in your early stages will come out fully machined, as well as the slide bar brackets and the whole of the motion, wheels and axles axleboxes and springs.

The spring hangers and brackets would be made at Tatanagar as well as the plate work in the platforms, buffer beams, etc.

Also the brake gearing could all be done in India only the special vacuum brake fittings being imported.

The boiler with all its special fittings would come out complete, leaving you the smoke box, chimney and all clothing, except the dome casing and beadings, to make at Tatanagar.

The cab you would make complete in India.

You would also make the bulk of the tender, only the wheels, axles, springs and special fittings being imported.

In fact it should be possible for you to manufacture some 20 per cent. of the locomotive and tender in India from Indian material leaving 80 per cent. to be imported in the early stages of your locomotive construction.

10. I think your European staff will have enough work cut out for them in the early stages, in training the Indian labour to reach normal efficiency in regard to the operations involved in the above 20 per cent. and that for twelve

months at all events after receipt of your first order it would not be advisable to put in any of the further equipment involved by your progressive programme of manufacture in order to increase the percentage of part made at Tatanagar from 20 per cent. to 40 per cent. which is your next stage.

11. The stage of progression to increase the percentage of Indian made items not only depends on numerous manufacturing conditions including of course, the specifications under which the orders are placed with you, but also whether the Railway Board desire to satisfy themselves on any particular facilities which your Company should provide for locomotive construction, or lay down the amount of work which shall be done locally before orders can be placed in India or assistance can be rendered to the Indian manufacturer.

12. Left to yourselves, you would be well advised not to rush the establishment of successive processes, but to perfect each process until you are satisfied that Indian labour can deal with it with reasonable supervision only.

13. The average British manufacturer does not actually produce himself more than 84 per cent. of the locomotive in his works, as the balance is in the nature of proprietary articles, etc., which are purchased from outside specialists. Whether you could reach this 84 per cent. in two years, or ten, is a matter which will depend entirely on the resources of your Company and the response given to you by the Indian labour as well as the policy and desire of the Railawy Board. I would put particular stress on the last point as until the Railway Board indicate what their requirements are, you are not to blame if you pursue that business programme which strikes you as being the best under the circumstances.

14. I consider that with the establishment of wagon manufacture at your Works certain changes in your lay-out have become inevitable, the more so as you must now give room for expansion both in the number of processes to be done locally and for your output of both locomotives and wagons. I suggest that you should concentrate on an output of 50 locomotives per annum to start with, and gradually bring this up to 100 per annum and base your programme of expansion both of buildings and equipment accordingly.

15. The outlay for such equipment is bound to be heavy and in discussion with you I appreciate that you are fully aware that a considerable amount of new money would have to be spent at each successive stage of increasing the percentage of work done locally, particularly when you take up the motion work manufacture and boilers.

16. I must, however, frankly indicate to you that I think it very dangerous for your Company to incur any additional outlay of any kind until the situation is very clearly and definitely settled between yourselves and the Railway Board. For one thing the policy of the Railway Board has not yet been made clear, and it is disappointing that your request to examine Mr. Chase's recent report on locomotive manufacture has not yet been granted. This, in conjunction with several replies which you have received from time to time in response to your requests to be allowed to tender for locomotives, or for other work of an allied nature in connection with existing locomotive in India makes me apprehensive that without a closer understanding between your Company and the Railway Board you are simply working too much in the dark and I cannot advise you to lay out any more money in your Tatanagar Works until you have a clear understanding as to the future policy and programme of the Railway Board.

17. Such future programme should include an estimate of the reasonable requirements for locomotives in this country year by year. That an additional number of locomotives will be wanted annually with the extension of about two thousand miles of railway every year and with increased traffic on Indian railways, can hardly be gainsaid. The Railway Board are in the best position to give you such an estimate and I cannot think for a moment that such an estimate does not exist.

18. Apart from the estimate of the number of locomotives required for railways in India, the whole procedure with regard to the placing of orders is difficult to understand. Ever since the communiqué of 1921 there has been an utter lack of uniformity in dealing with this question, and whilst one tender

was called for in India, on no other occasions have simultaneous tenders in India and in England been invited. It is for the Railway Board to decide once and for all their policy in this direction and their decision is bound to seriously influence you in your activities one way or the other. The rupee tender, with orders actually placed in India on a c.i.f. basis seems to be the proper course to adopt.

19. It would also appear that whereas the Government of India have from time to time expressed themselves in favour of the growth of industries generally in India and of the locomotive industry in particular, the attitude of the Railway Board with regard to your Company in the past would indicate that they do not share these views. In fact one might assume from their present policy that the Railway Board do not desire the locomotive to be manufactured in India at anytime by anybody or under any conditions whatever. Assuming that this is the case, it would be only fair to your Company that they should be given a clear declaration of policy of the Railway Board even if it is a negative policy, in respect of an undertaking such as yours.

20. In connection with this I cannot help mentioning that the Railway Board's acceptance of Sir Vincent Raven Committee's findings stands out in considerable contrast with their present attitude towards the efforts of your Company. The claim is made in that Report that spare parts for locomotives can be manufactured in India in State Railway Workshops more economically and cheaper than they can be purchased from manufacturers either in India or in the United Kingdom; whether this is a correct or incorrect assumption is open to considerable discussion. Personally I think it is incorrect, but, if it was correct, then the locomotive, which is purely an assemblage of duplicate parts and erection of such items as made, would not be outside the possibility of economic manufacture in this country. And if they can be so cheaply produced under methods which come under severe castigation in this Report, then it is obvious that with scientific commercial control, the manufacture of locomotives in India is proved by the Board's own experts to be a possible and successful undertaking. Considerable capital outlays have been sanctioned on the basis of this opinion for extending the State Railway Workshops. Therefore, the belief of Government of India in such economic manufacture is great. But if that is so, their attitude towards parallel efforts on the part of private enterprise appears to me both inconsistent and harsh.

21. From my experience of nearly forty years in the locomotive trade and my observations of Railways in many countries of the world, I am convinced that private enterprise can turn out the same articles every time at cheaper rates than is possible in any State Shop or even a Railway Company's Works with their complicated administrative controls and their ill-advised mixing up of manufacture and repairs though the absence of proper accounts does sometimes give the impression that State Work is better and costs next to nothing. The concensus of opinion, as shown by the majority of the adminitsrations controlling the world's railway mileage is, however, all to the contrary.

22. In my previous report I suggested that a tariff of 33⅓ per cent. was approximately the measure of protection that your industry needed, and this would have but a very minor influence on the Railway costs in respect of imported material, as in his recent evidence before the Accounts Committee in Simla, Mr. Parsons, the Financial Commissioner to the Railway Board, stated that locomotives and wagons formed but an unimportant item in the purchases of Indian Railways.

Such being the case, the effect of a tariff, intended to build up or assist in introducing such a very important training ground for India's mechanical needs as the locomotive industry, should meet with no opposition from the Railway Board, or if it does then to my mind the Tariff Board can safely ignore it.

The trouble in regard to a 33⅓ per cent. or any tariff in your case, is that you can only commence with a locomotive production containing but 20 per cent. of Indian material, and that 80 per cent. would be imported whereby the State would take back with one hand some 80 per cent. of what it had given with the other, were such a tariff agreed upon.

I have been thinking, therefore, of some measure of progressive bonus, which would cover your losses in the early stages, and yet give you an incentive to increase the proportion of local made items until you reach a stage of manufacture comparable with the work done by locomotive manufacturers at home.

As regards a bounty as an alternative and preferable method, the best basis in my opinion for such assistance would be fixed by the proportion of imported finished parts to the tonnage weight of finished work completed in this country.

The greater the gap filled up locally, the greater should be the amount of assistance.

This leads us naturally to a tonnage basis, and I suggest £50 per ton as a reasonable amount to start with for the first year, working it down at the end of 5 years to say £10 per ton of parts of the locomotive finished locally, so as to provide the manufacturer with a continuous incentive to manufacture a greater proportion of the locomotive in order to procure a uniform amount of total bounty per annum as the rate decreases.

Such a system as a basis to work from needs to be co-related as to the absolute amounts received by the locomotive manufacturer and for this purpose the total amount of bounty per annum should have some connection with the interest on capital value of that portion of the works devoted to locomotive manufacture, as well as to depreciation.

The orders placed should be such as to cover by way of this bonus interest at 8 per cent. and reasonable depreciation for the first year.

No restrictions would be needed for the following years and discretion in the matter of this bonus could be vested in the Railway Board, who will have realized by the end of the year commencing with the first locomotive deliveries the ultimate advantage which Indian Railways as a whole must obtain from the establishment of a locomotive industry in India.

The merit of the scheme roughly outlined above, lies in the fact that if adopted, orders could be placed in India *pari passu* with orders placed in England, at the Home price *plus* freight and Indian charges until the imported locomotive was ready to put into commission.

Such orders should, however, commence with one for at least 15 locomotives and tenders, and should increase in quantity to some 50 per annum and so arranged that no gaps occurred in the output of locomotives from your Works during the 5 years such a suggested arrangement was in force.

I should anticipate that under such an arrangement there would be sufficient incentive to you to increase the present possible proportion of Indian production of some 20 per cent. to a stage very nearly approximating to overseas practice, or at any rate with that goal appreciably in sight.

R. WRIGHT.

(10) *Letter from the Peninsular Locomotive Company, Limited, dated the 21st August 1926.*

As desired at the time of our examination, we beg to send you herewith a list of equipment which is in use for the manufacture of wagons amounting to about Rs. 22,00,000 giving particulars of depreciation in detail.

We further append thereto a list of machines, which are used on wagon work, but are really intended for locomotive work. We trust this information will prove satisfactory.

Block Account Statement.

	Rs.	A.	P.		%	Rs.	A.	P.
Buildings	8,95,234	2	0	depreciation at	2½	22,381	5	8
Machinery and plant	11,70,716	14	0	„ at	5	58,535	13	6
Works Railways and Sidings	91,280	15	4	„ at	2½	2,282	0	4
Water Pipe Line	10,829	8	0	„ at	5	541	7	7
Furniture officers quarters.	12,987	7	0	„ at	5	649	6	0
Drawing office furniture	399	12	3	„ at	5	19	15	10
Bombay office furniture	222	5	0	„ at	5	11	1	10
Motor car	500	0	0	„ at	25	125	0	0
Works office furniture	2,287	5	0	„ at	5	114	6	0
Small Tools and Works Equipment	9,427	6	0	„ at	5	471	6	0
Installing Works Lighting	2,630	2	3	„ at	5	131	8	0
Drawing, Design and Patterns	5,464	2	10	„ at	5	273	3	4
Total	22,01,999	15	8			85,536	10	1

List of Machines that are in use on wagon work but are really intended for locomotive work.

One 20″ Centres Sliding, Surfacing and Screw-cutting Lathe, with all-geared Headstock; fast and loose pulleys for 6° belt, 36″ 4-jaw geared Chuck; bed 17-ft. long to swing 8′ 6″ between centres, 2 saddles, gear box feed and fittings. By Tangyos.

One 16″ Centres Sliding, Surfacing and Screw-cutting Lathe, with all-geared Headstock for Motor Drive, 40″ 4-jaw Chuck, 26-ft. bed to swing 19′ 6″ between centres, with steadies, trays and fittings. By Dean, Smith and Grace, Limited.

One 16″ Centres S. S. and S. Lathe ditto ditto. By Dean, Smith and Grace, Limited.

One Frame Plate and Locomotive Firebox Bottom Ring Milling, Drilling and Boring Machine. Length of Bed and table overall 37′ 5¾″. Length milled 32′ 9½″. Width milled 4′ 9″ diameter Cutter and 16 H. P. Motor and Control Gear and fittings. By Kendall and Gent, Limited.

One Becker No. 6 Vertical Milling Machine, table 61″ × 18″.

One Becker No. 6 Vertical Milling Machine, table 61″ × 18″.

One Becker No. 5B Vertical Milling Machine, table 52″ × 14″.

Four Becker No. 4B Vertical Milling Machine with tables 26″ × 10½″

One Vertical Milling Machine, table 54″ × 19″. By Kendall and Gent.

One Archdale Vertical Milling Machine, table 14″ × 6½″.

Three Hulse Patent Vertical Milling and Drilling Machines, tables 32″ × 24″.

One Lincoln type Milling Machine. By Wm. Muir.

Two Herbert's No. 4 Vertical Milling Machines, tables 60″ x 15″.

One No. 4 Parkinson Horizontal Plane Milling Machine, table 60″ x 16″.

One 20″ Muir Slotting Machine 42″ Circular table on compound slide, etc., with Countershaft.

One Plate Edge Planing Machine, No. 10708.

One New Century Grinder. By Jones and Shipman.

One New Century Grinder. By Jones and Shipman.

NOTE.—The Milling Machines enumerated in this list are being used as Drilling Machines. They are more valuable than Drilling Machines but only turn out about ⅓rd of the work owing to slower speed.

(11) *Letter, dated the 24th August 1926, from the Peninsular Locomotive Company, Limited.*

As desired by the Chairman towards the close of the examination we beg to send you herewith the following:—

1. Letter from Mr. Wright, dated 17th August 1926, explaining in detail the plan set out in his letter, dated 6th August 1926, for bounty.
2. Statement of additional machinery to be ordered at each stage.
3. Statement working out the detailed effect of the bounty in the cost per ton of locomotive.
4. The plan of the Works showing the extensions which would become necessary when orders for fifty to a hundred locomotives are in hand, keeping the wagon output at a hundred per month.*

We shall be obliged if you will indicate what additional details are desired and also what further explanations the Board would like us to send down.

As Mr. Wright has other engagements to satisfy, it would be a great help if you can give us some general idea as to the time when we may be called upon again for an additional examination.

Enclosure No. 1.

JAMSHEDPUR,
August, the 17th, 1926.

MESSRS. THE PENINSULAR LOCOMOTIVE COMPANY, LIMITED.

DEAR SIRS,

In my report, dated August the 8th, I indicated, somewhat briefly, a method by which the Government of India could, if they desired, provide a measure of protection or assistance towards the starting up of a locomotive industry in India, on a *Tonnage Bonus Basis*, and in such a manner that it would provide a real incentive to the Indian manufacturer to produce a greater proportion of the locomotive and tender each successive year, over a five year period, commencing with a minimum of 20 per cent. of parts produced in India from Indian raw material in the first year, and committing the Railway Board to a minimum order per year of but 15 locomotives and tenders, with a proviso that, if found feasible, this quantity should be increased to 50 locomotives and tenders by the fifth year.

2. The basis of such a scheme to be a bonus per ton of finished parts of the locomotive produced at your Tatanagar works from Indian material on the following scale, provided the Indian production increased at the same time to the following minimum proportions:—

1st Year .	£50 per ton.	20 per cent. Indian production.
2nd Year .	£25 per ton.	40 per cent. Indian production.
3rd Year .	£20 per ton.	50 per cent. Indian production.
4th Year .	£15 per ton.	60 per cent. Indian production.
5th Year .	£10 per ton.	70 per cent. Indian production.

3. The scheme would be a simple matter to originate, as the basis price would be fixed by the current British price for the particular type of Standard Indian Locomotive involved, and the finished weights supplied and certified by the State Railways' Consulting Engineer in London, would decide the tonnage on which the Bonus was to be calculated.

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* Not printed.

4. The procedure takes the form of indenting for a certain quantity of complete Locomotives, combined with a batch of spare parts for the same type of engine. For instance, if the Railway Board were in the market for 30 locomotives and tenders of a particular type, they would issue their usual enquiry, but would specify that they required 15 of the locomotives supplied complete in England, together with 15 sets of parts for the same locomotives, which would comprise such items as the Indian manufacturer did not propose to produce himself from Indian material during the period in question. This list would take the form shown in second column of the attached sheets A to E.

5. Every locomotive is at the present time carefully weighed by the Inspector dealing with the work on behalf of the Consulting Engineers in England, and the finished weights are recorded on the sets of " as made " drawings.

Similarly, every item of the duplicate parts ordered at the same time, are weighed and recorded before shipment.

Therefore the difference between the weight which the Consulting Engineer certifies as the finished weight of the parts comprised in the second column of attached lists, and the finished weight of the complete locomotive and tender itself, comprises the exact weight of finished material which the Indian manufacturer would have to produce to complete the engines in this country, and on this certified weight the bonus will be calculated.

6. As mentioned above the current English Contract price will form the basis price for the Indian manufacturer's Contract, but to this will be added the cost entailed on the Railway Board from the time of shipment, until the locomotive is put into service in India, in running order, *plus* the bonus indicated above, as shown in the first column of accompanying lists.

7. On these attached sheets, A to E inclusive, I have plotted out an example of how such a scheme would work out in the case of one of the New Indian Standard Locomotives, and have selected the X. D. Type or Light Mikado of the 5′ 6″ gauge, for the purpose.

8. An examination of these 5 tables will explain very clearly my proposal, and indicate, how, in actual practice, the Government of India would provide a uniform bonus, year by year, for the whole 5 years, *pro rata* with current British prices, but on your Company would be thrown the onus of expanding your output in excess of the specified minimum proportion of Indian production, in order to obtain this uniform rate of bonus, based on a decreasing price per ton each successive year.

9. Your arrangement with the Railway Board should, if possible, ensure your having a minimum order for 15 locomotives and tenders, each year, increasing as the Board find it possible to do so, year by year, to 50 locomotives for the last year. The absolute amount of bounty might be made to depend on the rate at which the orders you received in any one year increased over the 15 locomotives and tenders minimum. For instance, it might be possible to arrange to reduce the bonus, proportionately for every locomotive ordered in excess of the basic 15 per annum.

10. Whilst the current price in England would fix the Indian basis price under this scheme, it is just possible that British makers might combined to increase the rates for the duplicate parts inordinately, with a view to wrecking such a scheme as this, intended as it is to encourage the manufacture of locomotives in India. In this event your association with Messrs. Kerr Stuart would operate to your advantage, as, whilst there would be absolute freedom on the part of the Railway Board to place their orders, both for the locomotives themselves, and the parts specified in column 2 of attached lists, in any quarter they might decide, it would be open to Messrs. Kerr Stuart to quote along with all other overseas manufacturers, and they would guard your interests by offering to supply the duplicate parts at the best possible rates, and thus demonstrate very clearly any tendency of other firms to cut rates for the complete locomotives, and recoup themselves in the prices they would obtain for the parts intended for your Indian construction. All indents

provide for the splitting up of an enquiry in any way the Government of India may decide, so that if this happened Messrs. Karr Stuart might be given the parts required for your Tatanagar construction, and the Railway Board would be able to take advantage of the low price quoted for the complete locomotives.

11. At the time of writing I have no information as to the prices at which locomotives have been placed in England in the case of the first batch of these new Standard Types recently ordered by the Railway Board.

I have, however, based the basic price, as well as the rates and weights for the various parts, from figures calculated by Messrs. Kerr Stuart, when preparing their tenders for this recent enquiry. It will be noticed that the rates per ton for the parts, work out higher than for the complete locomotives, but this is inevitable, as the cost of putting through duplicate items usually works out higher than for whole engines, so in the lists attached, this feature is in accordance with what will take place in actual practice even though the rates will vary from time to time.

12. The scheme, however, as a whole is a thoroughly practical one, will give a minimum of trouble in operation, and varies the rate per ton the Indian manufacturer will receive, under the third column of the lists, in strict accordance with the class of work he is engaged upon. In the first year, when doing what are perhaps the simplest forms of locomotive construction, he only gets £83 per ton, on these figures, increasing to £90 per ton, when the complete locomotive frame is undertaken, and up to £94 per ton, when the more intricate motion work is tackled, but dropping to £90 per ton in the two final years, when the industry is well on the way to establishment.

These ratios will exist no matter how the basic price varies. The Railway Board, however, pay an even rate for the whole of the five bonus years, and should you fail to adhere to your present progressive programme, the bonus rate the Board pays you, at once drops automatically, so from the point of view both of the Railway Board and yourselves, I can't imagine a scheme which would deal in a fairer manner with both purchaser and manufacturer.

13. For the purpose of this scheme, the terms "parts manufactured in India from Indian material" would include all such items as are not included in the list of finished parts the Railway Board would purchase at the time of placing the order in London for Locomotives and Duplicate Parts combined.

In the first two years there is nothing you could not obtain in India, but when you reached the stage of making parts which included material which would need to be imported into India in the raw state, such as tyres and axles in the rough, acid steel blooms, and boiler plates, copper plates, tubes, superheater elements, and other minor items, then these would need to be classed as Indian raw material, and you would make your own arrangements for purchasing them yourselves from overseas, subject to your obtaining the Railway Board's approval for the source of your supply, and putting on such subcontractors the onus of obtaining inspection certificates from the London Consulting Engineers, and the stamping of such parts by the Inspectors overseas in such a manner, as the Board would require for identification purposes.

14. With regard to the periods under which the Bonus system would operate, the first year should commence from the date your first locomotive under this scheme was tested in steam in your Jamshedpur Shops, and an approximate date for this to occur should be agreed with the Railway Board, at the time of any settlement, which I hope it will be possible for you to come to with the Railway Board.

15. I attach to this letter a sketch plan showing my views as to the future development of your locomotive and wagon departments so as to avoid any clashing of your two operations. Furthermore, I give you a list showing what additional equipment I think would be necessary to enable you to deal with a 20 per cent. production in the first year on your locomotive side, without interference with your present wagon production of some 100 per month.

16. If as suggested by the Chairman of the Tariff Board on Monday last, you intend putting this proposal before the Railway Board with a view of ascertaining whether a scheme such as this would meet their views as a basis for discussion in the near future, I shall be pleased to assist you in explaining these proposals to the Railway Board, should you desire me to do so, and in case there are points in this letter on which I have not made myself quite clear.

Yours faithfully,

R. WRIGHT,
Consulting Engineer.

Enclosure No. 2.

Additions required at your Tatanagar Works to ensure the construction of from 15 to 50 locomotives and tenders per annum, with a minimum of 20 per cent. local construction from Indian material, as per sheet "A" accompanying letter of August 17th, 1926.

Paving with wood blocks on suitable foundation, and fencing to prevent theft of valuable locomotive parts of half your erecting shop.

Pits for centre line of rails, etc., with drains.

Weighing pit and machined levelling surface, with necessary drains.

12 locomotive weighing machines, 20 ton capacity each.

10 tons Crane and 500' gantry, chiefly for use in wagon construction.

2 Pearn-Richard Boring Mills, medium size.

1 Pearn-Richard Boring Mills, large size.

Vertical Band Saw.

Horizontal Band Saw.

6 Asquith Drills (4 large and 2 smaller disc).

Horizontal grinding machine.

Norton Grinder.

Drop Stamps for wagon work.

Additional Air Compressor for wagon work.

Hydraulic Press.

Freight on above tools.

Foundation work for tools.

Before you can get on to full 50 locomotives per annum you will need to provide additional wagon erection shops to replace the area to be taken over for locomotive erection. See sketch in full yellow lines on plan of works.

Enclosure No. 3

Example of proposed method of Tonnage Bonus on Locomotive Construction in India on a 5-year basis and applied to the Indian Standard Locomotive and Tender.

1st Year. *Light 2-8-2 Mikado.* *Type X. D. 5'-6" Gauge.*

Cost to Railway Board per Locomotive and Tender.	£	Rate per ton. £	English parts to be purchased by Railway Board and cost debited against Indian manufacturer. *79 per cent.*	£	Rate per ton. £	Balance left to the Indian manufacturer to make 21 per cent. of Locomotive and Tender.	£	Rate per ton. £
Empty weight of L. and T. 113 tons.			1. *Boiler* complete with all internal fittings, header and elements but to be exclusive of smoke-box. ashpan, firebars, clothing and all external fittings, weight 27¼ tons.	2,350	86	Bonus	1,150	83
						Balance after allowing for English purchases.	766	...
English f. o. b. price .	8,660	76	2. *Side Frames*; complete with horn cheeks only fitted; but axleboxes supplied. This item is the frame as usually delivered to the erecting shop from frame shop; with no stretchers or saddle castings, etc. weight 24 tons.	2,025	84	Total .	1,916	83
Freight and all other charges until locomotive is on road in India and in running order. 15 per cent.	1,297	...	3. *Wheels and Axles*, weight 18 tons .	1,160	64			
			4. *Cylinders*, with piston and rod slide bars; cross-heads; slide bar bracket piston valves and metallic packing, weight 5¾ tons.	484	84			
Bonus at £50 per ton for 1st year on all parts made at Jamshedpur from Indian material. 23 tons at £5.	1,150	..	5. *Motion work*, complete with coupling and connecting rods, weight 6¼ tons.	662	106			
			6. *Springs*, weight 2¾ tons . . .	120	43			
			7. *Buffers*, weight ½ ton	30	60			
			8. *Brass* and other *special fittings*, weight 6½ tons.	1,250	227			
			Total cost of all imported parts, weight 90 tons.	8,081	89			
			Freight to India including insurance and landing and duty at 12½ per cent inclusive	1,010	...			
			Delivery to Tatanagar at equivalent of £1 per ton.	90	...			
			Total .	9,181	102			

Cost to Railway Board per Locomotive and Tender.		Rate per ton.	English parts to be purchased by Railway Board and cost debited to Indian manufacturer. *59 per cent.*		Rate per ton.	Balance left to Indian manufacturer to make 41 per cent. of Locomotive and Tender.		Rate per ton.
	£	£		£	£		£	£
Weight empty of L. and T. *113 Tons.*			1. *Boiler* complete with all internal fittings, header and elements, but exclusive of smoke-box, ashpan, firebars, clothing, and all external fittings, weight 27¼ tons.	2,350	86	Bonus	1,175	90
English f. o. b. price .	8,650	76	2. Made in India	...	...	Balance after allowing for English purchases.	3,068	...
Freight and all other charges until locomotive is on road in India and in running order. 15 per cent.	1,297	...	3. *Wheels and axles* weight *18 tons* . .	1,160	64	Total .	4,243	...
			4. *Cylinders* with piston and rods, slidebars, slidebar bracket, crossheads, piston valves and metallic packing, weight *5¾ tons.*	484	84			
Bonus at £25 per ton for *2nd year* on all parts made at Jamshedpur from Indian material. 47 tons at £25.	1,175	...	5. *Motion work* complete with coupling and connecting rods, weight *6¼ tons.*	662	106			
			6. *Springs,* weight *2¾ tons* . . .	120	43			
			7. *Buffers,* weight ½ ton	30	60			
Total cost to Railway Board for locomotive and tender partly built in India.	11,122	98	8. *Brass* and other special fittings, weight 5½ tons.	1,250	227			
			Total cost of all imported parts, weight *66 tons.*	6,056	91			
			Freight to India including insurance landing and duty, at 12½ per cent. inclusive.	757	...			
			Delivery to Tatanagar at equivalent of £1 per ton.	66	...			
			Total .	6,879	104			

Cost to Railway Board per Locomotive and Tender.	£	Rate per ton. £	English parts to be purchased by Railway Board and the cost debited to Indian manufacturer. *48 per cent.*	£	Rate per ton. £	Balance left to Indian manufacturer to make 52 per cent. of Locomotive and Tender.	£	Rate per ton. £
Weight empty of L. and T. *113 Tons.*			1. *Boiler* complete with all internal fittings, header and elements, but exclusive of smoke-box, ashpan, firebars, clothing and all external fittings, weight *27¼ tons.*	2,350	86	Bonus	1,180	94
English f. o. b. rate . .	8,650	76				Balance after allowing for English purchases.	4,370	...
Freight and all other charges until locomotive is on road in India and in running order. 15 per cent.	1,297	...	2. Made in India	...	...	Total .	5,550	...
			3. *Wheels and axles,* weight 18 tons . .	1,160	64			
			4. Made in India	...	...			
Bonus at £20 per ton, for 3rd year, on all parts made at Jamshedpur from Indian material, 59 tons at £20.	1,180	...	5. Made in India	...	...			
			6. *Springs,* weight 2¾ *tons* . . .	120	43			
			7. *Buffers,* weight ¼ tons	30	60			
Total cost to Railway Board for locomotive and tender partly built in India.	11,127	98	8. Brass and other *special fittings,* weight 5½ *tons.*	1,250	227			
			Total cost of all imported parts, weight 54 tons.	4,910	90			
			Freight to India including insurance landing and duty at 12½ per cent. inclusive.	613	...			
			Delivery at Tatanagar at equivalent of £1 per ton.	54	...			
			Total .	5,577	103			

Cost of Railway Board per Locomotive and Tender.	£	Rate per ton. £	English parts to be purchased by Railway Board and the cost debited to Indian manufacturer. *32 per cent.*	£	Rate per ton. £	Balance left to Indian manufacturer to make 68 per cent. of Locomotive and Tender.	£	Rate per ton. £
Weight empty of L. and T. *113* Tons.			1. *Boiler* complete with all internal fittings, header and elements, but exclusive of smoke-box, ashpan, firebars, clothing, and all external fittings.	2,350	86	Bonus	1,155	90
English f. o. b. rate .	8,650	76				Balance after allowing for English purchases.	5,693	..
Freight and all other charges until locomotive is on road in India and in running order. 15 per cent.	1,297	...	Weight 27½ tons	..	...			
			2. Made in India	...	...	Total .	6,848	...
			3. Made in India	...	.			
			4. Made in India	...	...			
			5. Made in India	...	...			
			6. *Springs*	...	...			
			Weight, 2¾ tons	120	43			
Bonus at £15 per ton for 4th year, on all parts made at Jamshedpur from Indian material. 77 Tons at £15.	1,155	...	7. *Buffers*	...	...			
			Weight, ½ ton	30	60			
			8. Brass and other *special fittings* . .	...	...			
			Weight 5½ tons	1,250	227			
Total cost to Railway Board for locomotive and tender partly built in India.	11,102	98	Total cost of all imported parts . . .	..	..			
			Weight 36 tons	3,750	104			
			Freight to India including insurance landing and duty, at 12½ per cent. inclusive.	468	...			
			Delivery at Tatanagar at equivalent of £1 per ton.	36	...			
			Total .	4,254	118			

Cost to Railway Board per Locomotive and Tender.		Rate per ton.	English parts to be purchased by Railway Board and the cost debited to Indian manufacturer. *8 per cent.*		Rate per ton.	Balance left to Indian manufacturer to make 92 per cent. of Locomotive and Tender.		Rate per ton.
	£	£		£	£		£	£
Weight empty of L. and T. *113* Tons.			1. Made in India	...	...	Bonus	1,042	90
			2. Made in India	...	...	Balance after allowing for English purchases.	8,363	...
English f. o. b. rate	8,650	76	3. Made in India	...	...			
Freight and all other charges until locomotive is on road in India and in running order. 15 per cent.	1,297		4. Made in India	..	...	Total .	9,405	...
			5. Made in India	.	...			
			6. *Springs*	...	...			
Bonus at £10 per ton for 5th year, on all parts made at Jamshedpur from Indian material. 104¼ tons at £10.	1,042	...	Weight 2⅝ tons	120	43			
			7. *Buffers*	...	...			
			Weight ½ ton	30	60			
			8. Brass and other *Special fittings* . .	...	...			
			Weight 5½ tons	1,250	227			
Total cost to Railway Board for locomotive and tender partly built in India.	10,989	97	Total cost of all imported parts . . .	..	...			
			Weight 8¾ tons	1,400	160			
			Freight to India including insurance landing and duty at 12½ per cent. inclusive.	175	...			
			Delivery at Tatanagar at equivalent of £1 per ton.	9	..			
				1,584	180			

(12) *Rules of Apprenticeship and Articles of Agreement of Apprentices.*

RULES OF APPRENTICESHIP, 1925.

1. There shall be two classes of apprentices:—

Class I.

(*a*) Literate, who will be admitted as the result of an entrance examination and who before sitting for the examination must show proof that they have passed the Intermediate Arts or Science.

Class II.

(*b*) Apprentices who have not reached this standard and who will be selected by the Works Manager, preference being given to the sons of work employees.

2. The apprenticeship in each case will be for five years.

3. Pay will be given on approved service as follows:—

Class I.

	Annas per day.
1st year	14
2nd year	16
3rd year	18
4th year	22
5th year	26

Class II.

1st year	8
2nd year	9
3rd year	10
4th year	13
5th year	16

The year shall be a full working year and all lost time must be made up before increments are given and before a final certificate of apprenticeship is granted.

4. Class I apprentices will be generally trained for supervisory posts and will spend the following periods at various jobs.

	months.
Pattern shop	6
Moulding shop	6
Blacksmith's shop and forge	6
Fitting shop	15
Machine shop	12
Erecting shop	6
Drawing office	9

5. Class II apprentices will be definitely trained to a trade and will spend four years at the trade selected with about one year divided up into two periods of about 6 months each at an allied trade. The trade will be:

Fitting.
Machinists (Turners).
Blacksmith.
Moulders.
" Patternmakers.

Patternmakers will have a course of 6 months in the moulding shop and 6 months in the blacksmith's shop. Moulders will have a course of 6 months in the pattern shop and six months in the blacksmith's shop. Blacksmiths will have a course of 6 months in the fitting shop and 6 months in the machine shop. Machinists will have a course of 6 months in the fitting shop and 6 months in the blacksmith's shop. Fitters will spend 6 months in the machine shop and 6 months in the smith shop.

6. During apprenticeship, Class I apprentices will spend 4 hours per week during working hours on theoretical study for the first two years and 6 hours per week during the following three years.

7. During apprenticeship, Class II apprentices will spend two hours per week during working hours on elementary study for the first two years and thereafter 3 hours per week.

8. Class II apprentices who show special proficiency may be promoted to Class I.

9. On conclusion of apprenticeship a certificate detailing the work done during the course, the degree of proficiency attained, and the conduct and behaviour of the apprentice will be issued to the apprentice concerned.

10. It will be a matter of absolute discretion for the Company to approve of the apprentices who may be admitted from the applicants and the Company will be free to discharge any apprentice at any time during the period of apprenticeship for reasons which in the opinion of the Works Manager are sufficient without being called upon to state such reasons.

11. An apprentice must always remember that he is going to a factory and not to a school and he will be liable to dismissal at any time without notice.

12. Every apprentice will be subject to all the discipline, to which an ordinary employee is subject, and for irregular attendance, for misbehaviour or for neglect of instructions he will be liable to a fine or to dismissal from the Works.

13. Every apprentice will bring with him a recommendation of an approved party, who will be responsible for his good behaviour during the period of apprenticeship.

14. The apprentice rules are liable to be changed at any time by the Company and no obligation of any kind on the part of the apprentice would be created by any change in the rules or for the entire discontinuance of the apprenticeship programme if it is found unworkable.

15. Each apprentice will be expected to arrange for his own housing in Tatanagar and the Company can undertake no obligation in this direction.

16. Each apprentice will deposit with the Company a sum of Rs. 100 and enter into an agreement as per form herewith. The Rs. 100 would be considered as premium payable to the Company and not liable to be returned under any conditions.

17. At the end of the period of apprenticeship the Company does not bind itself to find employment for any apprentice, but the final certificate will state the experience gained by the apprentice during the course of training and the opinion formed by the Works Manager of the capacity of the apprentice.

ARTICLES OF AGREEMENT made and entered into this day of 192 , between at present of in the town of who completes his year of age on the day of 192 , of the first part, and The Peninsular Locomotive Company, Limited, of the second part.

1. Whereby it is witnessed that the said doth by these presents put, place and bind himself as an apprentice at the works of Messrs. The Peninsular Locomotive, Company, Limited, to serve them from the day of 192 , for and during and until the full end and term of five years, fully to be completed and it is hereby agreed and declared that if at any time or times the said from any cause whatsoever absent himself from work with permission, the said shall from and after the expiration of his said term of service continue to serve the said Company for such period as shall, together with the time of his actual service, make up the full term of years.

2. That the said will serve in the Fitting Shop of the said Company or in whatever other branch he may be deemed suitable for.

3. That the hours of attendance shall be the usual factory hours for such time as the Works Manager fixes from time to time, Sundays excepted, or otherwise as necessity arises.

4. That the said will readily and cheerfully obey and execute all lawful commands and reasonable orders of the said Company's assistants and will upon the request and at the cost and expenses of the said Company proceed to any part of British India or its dependencies for the purpose of executing and assisting in the execution of any business undertaken by the said Company and shall not depart nor absent himself during the said term without first obtaining permission in writing but shall at all times during the said term conduct himself with all due diligence, honesty and temperance.

5. That should the said absent himself from business without permission or otherwise misconduct himself it shall be lawful for the said Company or their Works Manager for the time being for the first offence to suspend the said for such a period as they or their Works Manager may deem fit and the said apprentice shall and will at the expiration of each year serve the said Company two days for every one of the days he may have been suspended. And it is further agreed that should the said commit any grave offence or absent himself without leave or otherwise misconduct himself a second time, it shall be lawful for the said Company to terminate this agreement.

6. That should the conduct of the said during the continuance of this agreement be considered satisfactory the said Company shall and will pay the said at the rate of Rs. per day for the first year of his term of service, at the rate of Rs. per day for the second year of his term of service, at the rate of Rs. per day for the third year of his term of service, at the rate of Rs. per day for the fourth year of his term of service, at the rate of Rs. per day for the fifth year of his term of service.

7. That the said will mark his daily attendance by the insertion of the ticket allotted to him in a box from a board at the entrance gate of the works, also enter up his daily works report book, which will be signed by the Works Manager each month.

8. That the said shall pursue the theoretical studies provided for in rule of apprenticeship rules as directed from time to time from the commencement of the service, and if called upon to join in an institute or school for this purpose, he shall pay out of his own pocket the necessary fees and shall and will attend the schools regularly.

9. That the said shall purchase from the Company the following tools, cost of which will be deducted from his pocket money mentioned in clause 6 of this agreement.

1 12″ steel rule, 1 pair inside callipers, 1 pair outside callipers, 1 pocket square for his use throughout his term of apprenticeship and he must maintain these in good order. Should he at any time be found without such tools the Company will replace them and debit his pocket money with the cost of such replacements.

10. That at the end of the full term of five years, the said Company will grant to the said on the satisfactory termination of his apprenticeship a certificate testifying to the abilities, qualifications and conduct of the said .

In witness whereof the said parties to these presents have hereunto set their hands the day and year first above written.

Witness to the signature of apprentice

Witness to the signature of The Peninsular Locomotive Company, Limited.

Director.

We hereby acknowledge receipt of the sum of Rs. 100 (one hundred) only as premium paid in consideration of the terms agreed upon as per stamped receipt granted to . on the day of 192 , which sum will not be refunded on any account.

THE PENINSULAR LOCOMOTIVE CO., LTD.,

Director.

THE PENINSULAR LOCOMOTIVE COMPANY, LIMITED.

B.—ORAL.

Evidence of MESSRS. MANU SUBEDAR, R. WRIGHT and G. W. SCRUSE recorded at Calcutta on the 16th August 1926.

Wagons.

President.—I had better dispose of the wagons question first.

Mr. Subedar.—Yes.

President.—Mr. Wright, are you interested in the wagon question?

Mr. Wright.—No.

President.—Mr. Subedar, are you the Agent of the Company?

Mr. Subedar.—I am the Director of the Company.

President.—Are you in charge of the works?

Mr. Subedar.—I am in charge of the executive work, *i.e.*, in charge of administration.

President.—You have asked us to treat as confidential this letter of yours dated 6th July 1926 in which you deal with costs. I may tell you that we can't do it.

Mr. Subedar.—Treat it as confidential, if possible.

President.—It is not possible for this reason that we have already got the costs of the other three manufacturers.

Mr. Subedar.—Have you got them in this detailed form?

President.—This is nothing in comparison to theirs.

Mr. Subedar.—We can supply you in any greater detail that you desire.

President.—We have got much more detailed costs in the case of the Indian Standard Wagon Company.

Mr. Subedar.—This also gives complete costs. If you think that these figures could not be kept as confidential you might use them as you think best.

President.—They will have to be dealt with in the ordinary way. I don't think it would be much use our going into your works costs for the obvious reason that you have not been working for any length of time.

Mr. Subedar.—We have not reached the normal production except in the current month.

President.—In any case if we make any recommendation we cannot make a special recommendation as regards you. If it was a question of bounties or duties we must go by general principles and it seems to me that we will very largely have to depend on the costs of the Indian Standard Wagon Company.

Mr. Subedar.—I think we shall approximate the most efficient producer in the next year.

President.—If we make any recommendations at all, we shall have to depend very largely, as I say, on their costs and you will have to take your chance.

Mr. Subedar.—All right.

President.—As to whether you are able to reach those costs or not is a different matter.

Mr. Subedar.—You may take it that we are quite confident of reaching the cost of the most efficient producer.

President.—That is satisfactory. The only difficulty is that we will have to find some basis for differentiating the costs for different classes of types of wagons. You are making A-2 and they are making C-2.

Mr. Subedar.—They have an advantage over us if the Tariff Board deals with a wagon as such. If the scale of bounty is fixed at a round sum per wagon, then it gives less to the manufacturer who makes A-2 than the manufacturer who makes C-2.

President.—Yes. Some adjustment may be possible.

Mr. Subedar.—We have therefore suggested that if you keep to the bounty-system, the bounty should be proportionate with the value of the wagons rather than with the number.

President.—The difference between A-2 and C-2, so far as foreign prices are concerned, is not very big—about Rs. 200.

Mr. Subedar.—There is a difference. Assuming it is Rs. 200 . . . . .

President.—You mean to say that it represents the additional bounty that you require.

Mr. Subedar.—Yes. When you work it out for the whole 1,000 wagons, it makes a difference of Rs. 2 lakhs a year, on which Rs. 2 lakhs we have to put in lot more labour. It is something serious for us, though per wagon it is a small amount.

Mr. Mather.—It doesn't follow that the rate of bounty per wagon must be substantially different.

President.—It should work out in the same way, if you take it on the *ad valorem* basis. Supposing the bounty corresponds to the duty, and the duty is 10 per cent., if the A-2 wagon costs Rs. 3,000, you get Rs. 300 and if the C-2 wagon costs Rs. 2,800, you get Rs. 280.

Mr. Subedar.—That would be a very fair way of arranging it.

President.—That is about the difference.

Mr. Subedar.—On 1,200 wagons it would make a difference of about Rs. 25,000 to us.

President.—Something like that.

Dr. Matthai.—In your estimate of future costs, are you thinking of an output of 1,000 wagons?

Mr. Subedar.—We have worked these costs on an output of 1,000 wagons, *i.e.*, on the basis on which we are working now. If you take the future, say beyond March next, I should work out these costs on 1,200 wagons. Of course it is very difficult to say. All these are assumptions as to the future. It is very difficult to say which particular elements of cost will go down and which particular elements will go up. I think that they won't go down. Our output might come to 1,200 next year.

Mr. Mather.—What deliveries have you been actually giving during the last two or three months?

Mr. Subedar.—It averages 60, but that is due to the conditions in the erection shop. That is why we are extending the erection shop. We have advanced very far with the work in machine shop and smithy on wagons on order.

President.—The Controller of Stores estimates your capacity at about 900 wagons a year.

Mr. Subedar.—I think that it would be an under-estimate. It is somewhat unfair to us.

President.—You yourself give your capacity at about 1,000 wagons.

Mr. Subedar.—I think we should be allowed to put our best efforts and our best efforts would be if we work on the basis of 1,200 wagons next year.

Dr. Matthai.—Of course your actual maximum capacity so far would work out at about 860.

Mr. Subedar.—Yes.

Dr. Matthai.—As far as that is concerned, the Controller's estimate would not be far wrong.

Mr. Subedar.—His estimate is based on the past. We have got 9 more machines on order which have been shipped already and the new erection shop

is being laid out. New rails are being laid out. We have put in a couple of extra cranes. All these improvements would enormously increase our capacity next year. I am taking it at 1,200.

President.—Up to 30th April 1926 what average have you reached per month?

Mr. Subedar.—We started with 20 wagons in October 1925 and as a matter of fact we had not all the new machinery which we put down for wagons. Since the last report we have spent about Rs. 4½ lakhs on additional equipment for wagons, part of which came in September. As it came in, it was put to use. The output naturally was lopsided. In some part of the works it was 10 wagon sets a day, in another it was 5 wagon sets and in another it was 2 and in the erection shop it was very low. That was on account of the various factors which will not occur again. For example we didn't get the wheels and axles in time.

President.—Why should you bring down the cost of material by about Rs. 600?

Mr. Subedar.—Do you mean the Indian material?

President.—No, I mean the total.

Mr. Subedar.—I would explain it in this way that Rs. 376 item in the first column was things which, when we got the first order, we ordered out from England. All these things we are now making locally. Therefore it is knocked out in the next column. Only the material goes into the Tata material cost. We take the raw material and make these items here.

President.—That accounts for that.

Mr. Subedar.—Yes. The other difference in the English material (Rs. 1,179 *minus* Rs. 979) of Rs. 200 is due to the reduced price which is quoted for English material. This amount is based on orders that we have placed. They have been less than our previous purchases by so much. Whether our purchase was altogether economical before is a different question. As I say, we had not reached our normal efficiency, but we are reaching it now.

Dr. Matthai.—You make it exactly Rs. 200 on raw materials purchased outside.

Mr. Subedar.—Yes.

President.—On what basis have you calculated your depreciation?

Mr. Subedar.—We have calculated depreciation on the basis of buildings at 2½ per cent. and machinery at 5 per cent.

President.—And you divided it by 1,000.

Mr. Subedar.—Yes.

President.—For this actual order what price did you get?

Mr Subedar.—We are delivering at present at Rs. 3,823.

President.—Does the present order cover your works cost?

Mr. Subedar.—Do you mean the 1st column? The first column order is finished.

President.—How much did you get for that?

Mr. Subedar.—We got Rs. 4,400.

President.—And the next one?

Mr. Subedar.—Rs. 3,823. That is what we are working on now.

President.—You have done better.

Mr. Subedar.—I think at that price, but that is due to an accident. As the Railway Board could not give us wheels and axles, they have allowed us an extra period for delivery and they have also taken into account that we are just starting. The other Companies are delivering on the basis of Rs. 3,470.

President.—That is for the A-2?

Mr. Subedar.—Yes.

President.—Burn and Co.'s order?

Mr. Subedar.—Yes.

President.—You have got it for Rs. 3,823.

Mr. Subedar.—That is because the order is an extended order. As a matter of fact our last tender price was 4,000. That was rejected on the ground that we had enough work for the year and we should not be given any further orders.

Dr. Matthai.—That was for A-2.

Mr. Subedar.—Yes.

President.—This future estimate that you have given, is it for the near future or when?

Mr. Subedar.—You can take it as a current thing from October onwards, but our difficulty will be that these prices will be seriously affected by the fact that we may have no work for two months in January and February. In certain sections of our shop for example in the smithy shop, we have already done work for about 300 wagons; the next order we shall complete by the second week of November. From the middle of November till we get the new order, we will have no work in the smithy. That would increase the incidence of the overhead. It is about the discontinuous orders that I am talking here.

Block value and depreciation.

President.—What is the total block value you have taken in the depreciation account?

Mr. Subedar.—About Rs. 32 lakhs.

President.—That includes your equipment for locomotives.

Mr. Subedar.—That includes for the whole works as at present.

President.—You can get the depreciation only on wagons just now.

Mr. Subedar.—As a business concern we reckon depreciation on the work done and the output is only wagons. We are not doing it deliberately, but we are doing it as a matter of accounts.

Mr. Mather.—What is the value of the plant that you cannot use for wagons?

Mr. Subedar.—Rs. 10 lakhs.

Mr. Mather.—Leaving about Rs. 22 lakhs for the value of the block which is used for the manufacture of wagons.

Mr. Subedar.—Yes.

Mr. Mather.—How much of that Rs. 22 lakhs would be land, buildings and plant and machinery?

Mr. Subedar.—We have not worked it out separately for wagons. We will have to work it out and send you.

President.—It is important to have depreciation shown in the form in which we ask for it. I think that we sent you a copy of the form along with our letter of the 25th May, 1926, which is printed on page 420 of the blue book.

Mr. Subedar.—Some part of the machinery is such that it is capable of being used for both purposes.

President.—Whatever machinery you can use for wagons is part of your wagon equipment. First of all I want you to exclude everything that you cannot use at all for wagon building and then to divide it into land, building plant and machinery, etc.

Mr. Subedar.—There are some equipments which we are using on wagons at present because we want to make the best use of them. They are not intended for wagon building at all. They are too valuable machines to be used for that. What should we do with such things?

Mr. Mather.—You might give us a note that these machines are more expensive than would normally be installed.

Mr. Subedar.—These machines are intended for the use of building locomotives but are used for building wagons temporarily.

President.—On what capital have you calculated the interest?

Mr. Subedar.—On working capital.

President.—Does it include profit and everything?

Mr. Subedar.—It includes all the borrowed capital of the company. In this matter we are in a transitional stage. We have not issued all the shares which we should issue.

President.—Ordinarily the capital on which you would be entitled to earn would be your block value *plus* a certain amount of working capital. That is the principle we ordinarily apply.

Mr. Subedar.—This does not cover the whole block value. It covers only a portion of the block value which is put up from the borrowed capital and which has not yet been issued in the form of shares but which we intend to issue.

President.—Your figures would be all wrong. If we were to make our recommendation on this basis, you won't get enough. We want the replacement value of your block.

Mr. Subedar.—Rs. 32 lakhs.

President.—This is, I take it, the book value.

Mr. Subedar.—Yes.

President.—You have got to reduce it to its replacement value—I mean its reasonable value. We also allow a reasonable rate of interest on necessary working capital. That is what we ordinarily do.

Mr. Subedar.—A very large amount of working capital is required for wagons. There is considerable delay from the time the material is issued till it is switched on to the work for which it is wanted. I have calculated that in the case of some items there has been a delay of 6 months. We have to order Tata's material well in advance. We reckon our working capital at about Rs. 8 lakhs.

President.—What is your block value?

Mr. Subedar.—Rs. 22 lakhs for wagon work.

President.—Altogether Rs. 30 lakhs.

Mr. Subedar.—Yes.

President.—Your block value may not be what we consider a reasonable value.

Mr. Subedar.—On that score you will find it much the other way. We have acquired considerable amount of valuable plant at really low cost.

President.—As a matter of fact, as I say, this will not enter very largely into the question because we must take the most economic unit that is at work.

Mr. Subedar.—We are quite prepared to go on that basis.

President.—I don't know how you have worked out this Rs. 150.

Dr. Matthai.—What is your total borrowed capital?

Mr. Subedar.—At present we have a fixed loan of Rs. 12 lakhs and cash credit to the extent of Rs. 7 lakhs—altogether Rs. 19 lakhs.

Dr. Matthai.—What is your total paid up capital?

Mr. Subedar.—It is Rs. 16 lakhs on the books.

Mr. Mathias.—What proportion of your machinery was bought second hand?

Mr. Subedar.—I cannot tell you off hand. There is certain number of machines which we have purchased second hand. The buildings are all second hand. It is in buildings that we have made considerable economies. The replacement value will be 3 times the money that we paid.

Mr. Mathias.—And the machines?

Mr. Subedar.—Some of them were bought second hand and at very low price. But the recent equipment of about Rs. 4½ lakhs was all entirely new.

Mr. Mathias.—Roughly, the wagon machinery is all new.

Mr. Subedar.—Yes.

Mr. Mathias.—And the locomotive machinery was bought mostly second hand.

Mr. Subedar.—Not mostly second hand. Some are new and some second hand.

President.—At the rate of Rs. 150 on 1,000 wagons, it requires a capital of about Rs. 20 lakhs at 7½ per cent. That includes your working capital and block value.

Mr. Subedar.—Yes, but that would not cover the book value of our block. At present it stands at Rs. 16 lakhs.

Mr. Mather.—Do you consider that Rs. 150 per wagon would provide you a sufficient sum to pay the interest on working capital and a reasonable profit?

Mr. Subedar.—There is no profit included in that. It is purely out-of-pocket interest, which we regard as charges.

Mr. Mathias.—Where does your profit come in?

Mr. Subedar.—There is no profit provided in the list. It is all actual costs.

President.—According to our calculations, we should say that part of it was profit.

Mr. Subedar.—It would be profit when we convert the borrowed capital into shares.

President.—We would allow so much interest on working capital and depreciation which you have got already and the balance would be treated as profit. The point is this. If Rs. 8 lakhs is taken as your working capital, the remaining Rs. 12 lakhs is your fixed capital. You get 7½ per cent. on Rs. 12 lakhs.

Mr. Subedar.—As a matter of fact, we intend this loan of Rs. twelve lakhs to become preference share capital entitled to so much. We have not done the conversion so far.

President.—It does include a certain element of profit.

Mr. Subedar.—It does not. But as the output increases, the figure for interest will be reduced.

President.—We are taking these figures as a basis for discussion.

Dr. Matthai.—Part of the interest is return on fixed capital.

Mr. Subedar.—Yes.

President.—In any case in so far as this capital is borrowed capital, it means that you must have a return on that part of your capital before you do anything else.

Mr. Subedar.—Yes.

Method of protection.

President.—There is one point that arises as regards the method of protection. You are asking for a duty instead of a bounty. The bounty system has one advantage of which you have had the benefit, and that is that it secures you a certain amount of orders. If you have a duty, even excluding for the moment the question of foreign competition, the internal competition may press you out altogether.

Mr. Subedar.—Does the bounty system ensure continuity of orders? Our experience on the last occasion proved the contrary.

President.—That is another point. What I mean is this. If the Railway Board says that it is buying 4,000 wagons, under the bounty system it distributes amongst the four works. Supposing we accept your proposal for a duty and then tenders are called for in the country, the lowest tender is entitled to get the whole order. In such a case you may be entirely left out for one or two years or, it may happen, for ever.

Mr. Subedar.—That would undo the whole work done so far.

President.—I want to know whether you have fully considered your proposal.

Mr. Subedar.—We suggest a tariff because the bounty has led to constant irregularities. We have pointed that out in our note.

President.—It may be the lesser evil of the two. It is much better to get an order, say, for 500 or 600 or 800 wagons every year than to be left out altogether for a year or two. It is much better from your point of view. It has nothing to do with us. I am trying to explain what the position might be in the event of the Board accepting your proposal.

Mr. Subedar.—We have therefore coupled our proposal for a tariff with another clause that orders for 4,000 wagons must be placed in this country.

President.—They are placed in the country. The Indian Standard Wagon Company may underquote anybody whose output is smaller.

Mr. Subedar.—If it comes to rate cutting, they would cut us out one year and next year we would quote such a rate that they would not be able to stand.

President.—It is for you to consider whether it would be in your interests to be left out altogether for a year or more.

Mr. Subedar.—The important thing is that the Railway Board should ascertain the reasonable price and having got that, they should divide the orders amongst the people at the lowest price which they have been able to ascertain and the tariff merely governs the amount of assistance.

President.—What is the advantage in that case? Really if the Railway Board has to distribute the orders, what advantage do you get by the duty?

Mr. Subedar.—I shall tell you how we would quote. If there was a duty of 25 per cent. on wagons, and if our total capacity was 1,200, we would quote for about 600 for the full duty and for the remainder—as you say it is better to have something—we would quote on the basis of 10 per cent. and we would allow the 15 per cent. to go and we would average out. This is what we would do in practice in order not to be left out without something.

President.—It is not for me to advise you but I am just putting it to you that you may not be playing for safety even so. Let me put it this way. The Indian Standard Wagon Company is at present at any rate in the strongest position.

Mr. Subedar.—They started earlier than we did.

President.—Theirs is a much bigger unit, and they may underquote all of you. They get all the orders for a year or two. In the meanwhile you have got no big reserves, you have got nothing else that you can turn to, and all the good that the bounty may have done may, for that reason, be wiped out.

Mr. Subedar.—I think that the Railway Board ought to distribute the orders as at present.

President.—At what price?

Mr. Subedar.—At the lowest ascertained price and in order to ascertain it fairly low, let them take the English price *plus* 25 per cent. or whatever the scale of tariff you may fix. We are not trying to get more money from the Railway Board. We want a continuity of orders at reasonable price. We have said in our evidence that on one occasion the fear of being left out altogether led us to quote horribly low rates. When we got the order, all the other wagon companies were angry with us.

Mr. Mather.—Which is the "horribly low rate"?

Mr. Subedar.—That is the rate at which we are delivering.

President.—That is a high rate.

Mr. Subedar.—That is due to an accident. Our rate was Rs. 500 lower than Jessop's. It is due to the accident of a subsequent fall in price, of which we got the benefit.

President.—I don't think that the Railway Board got any advantage.

Mr. Subedar.—The Railway Board have scored over everybody because from the successive rates at which they have been buying, you can see that

they have got the very best prices. I don't think that the Railway Board can complain that in their wagon purchases they have lost on account of the bounty system.

President.—That is not the question. The point is that under the bounty system all the wagon builders have got a higher price than they would have got under the duty system in spite of their saying that they quoted a very low price.

Mr. Subedar.—We have by experience found out that the bounty system is intricate and leads to considerable uncertainty. What we want is business certainty—never mind whether we get a low or high price.

Mr. Mather.—Is there any such thing as business certainty?

Mr. Subedar.—I mean the absence of horrible uncertainty.

Dr. Matthai.—Supposing the bounty were fixed like the present rail bounty, would you prefer it? That is to say a certain rate of bounty is prescribed from year to year—it is not determined with reference to the difference between the lowest c.i.f. price and the lowest tender, it is a fixed bounty; would you consider that better than the present system?

Mr. Subedar.—I would, provided you do not put a limit to the total amount. The amount of bounty would be limited in that case by the output.

Dr. Matthai.—Would not that give rise to the same danger as the President pointed out, namely, that one of you might be left out altogether? After all there are only two wagon builders who really specialize in this business. Supposing it so happened that a firm was able to underquote you for two or three successive years, you would be done for and the whole industry might receive a serious set back?

Mr. Subedar.—For that purpose we would tender on the ladder system. We would quote for a certain number of wagons so low that there would not be any danger, and for a certain number the other way and we would average the price out.

Dr. Matthai.—That again would mean that only two people can compete?

Mr. Subedar.—When it came to that, I don't think it would be to our mutual interest to cut one another.

President.—Then the foreign manufacturer comes in this way. Supposing the Railway Board say they are going to have 4,000 wagons; the foreign manufacturer knows you are going to get a bounty of Rs. 600, and they cut down their prices. Won't you run the risk of being left out?

Mr. Subedar.—The Tariff Board must devise something to safeguard us against that—of course I quite see the difficulty of hitting on something which would satisfy everybody, but something better than the present system, because past experience shows that the working of the bounty has not been satisfactory because it has been determined by the extent of the lowest price quoted by somebody.

Mr. Mathias.—Don't you think that the bounty system on the whole has encouraged the wagon industry?

Mr. Subedar.—I think what really saved the wagon industry from extinction is the fall in prices.

Mr. Mathias.—Not the interest taken in the wagon industry by the Railway Board?

Mr. Subedar.—It is the continuity of orders rather than the amount of money that they have given us which has helped the industry.

President.—Supposing a duty is put and simultaneous tenders are called for, then of course if you quote below the foreign price you get the whole order, but if you don't you get half the order just to keep you going, and the other half goes to the foreign manufacturer. Will that meet the situation?

Mr. Subedar.—That presupposes that the foreign manufacturer has discounted the duty already?

President.—Yes.

Mr. Subedar.—If that comes about, it would give us a nucleus to keep us going. We lose money in the lean year, but it is better than no orders.

President.—If you under-quote you get the whole order, but if you don't you get only half.

Mr. Subedar.—A slight improvement on that system which you have just suggested would be that our standard output should be restricted from now and if you like we should be prevented from increasing it beyond a certain figure.

President.—That would be detrimental to the interests of the industry because the larger the out the better the chances of the costs coming down. If you restrict your output in that way, prices would remain high and it would prevent a more efficient firm from increasing its output.

Mr. Subedar.—You can say for the next three years that so many orders should be placed in India and you fix the figure for the Indian manufacturer at, say, 4,000 wagons.

President.—It means that the foreign manufacturer will not tender when he feels that there is no order to be had and that tenders are simply invited for the purpose of comparing prices.

Mr. Subedar.—He will get any excess over 4,000 wagons.

President.—Suppose there is no excess, he won't tender at all. He will only quote if there is this inducement that he might at least get half the orders.

Mr. Subedar.—If the Railway Board come into the market—they are the best buyers in the world—I do not think any manufacturer will say "we are not going to tender for you."

Mr. Mather.—Would you get such close quotations for wagons as at present?

Mr. Subedar.—If the Railway Board call for tenders, say, for 500 wagons it is good enough for individual works—not for one works—and you will get close prices from ten of them for these wagons.

Mr. Mathias.—You may get that for the first year or the second year, but if the same system goes on and each year the British manufacturer gets no orders, how long are they going to quote?

Mr. Subedar.—You are presupposing two things—an enormous expansion of the wagon industry and a restriction on the wagons purchased by the Railway Board. I think in view of the increased mileage.....

President.—If protection succeeds at all it is assumed that the industry is able to meet the whole of the domestic demand. That being the position, there is no room for the foreign manufacturer in this country. Why should he tender when he knows that this industry produces all the wagons and in practice orders are to be placed in India?

Mr. Subedar.—He will quote if he has reasonable hopes of securing orders.

President.—He has no hopes if the industry is supposed to expand in proportion to the needs of the railways. Then there is no excess of orders.

Mr. Subedar.—Unless the wagon builders form themselves into a combine.

President.—There is already correspondence in the newspapers about pig iron. Why should we pre-suppose that there will not be any complaints of a combination in the case of wagons?

Mr. Subedar.—I think the Railway Board ought to favour the manufacturers in this country. If they do not do that, they knock the bottom out of the whole finding of the Fiscal Commission and with that the findings of the Tariff Board.

President.—To prevent a combination like that you get half the orders. The idea is that you are put more or less on the same level as the foreign manufacturer by reason of protection. Even then if you do not underquote him you are either inefficient or you do not compete intentionally.

Mr. Subedar.—When you say half the order, that would mean not enough work for us, and also the possibility, which you yourself mentioned, of one particular works getting all the orders. So that unless you provide against this possibility this system would not work satisfactorily. What we want first and what we want last is continuous orders and what we want is a reasonable price.

Dr. Matthai.—Under the present system you are tempted to quote an uneconomical price, but then there is a reasonable certainty that you would get a few orders. Under any other system you might be saved from the temptation of quoting uneconomical prices but you might be left without orders.

Mr. Subedar.—We find ourselves left without orders under the present system.

Dr. Matthai.—The danger may be much greater in the other case.

Mr. Subedar.—We quoted Rs. 4,000 per wagon and the order went for Rs. 3,400, whereupon we sent a telegram to the Railway Board that "as we shall be out of work for the last two or three months of the official year we are prepared to take 200 wagons at the lowest price at which you are placing the orders". They said 'no, we would not give it to you' and we are now in the position of having some portion of the works lying absolutely idle for two or three months.

President.—Was it not due to the fact that you were late in your delivery and therefore the Railway Board thought you would not be able to carry out the orders?'

Mr. Subedar.—We thought we would not have enough work for the whole year and we asked for only 200 wagons extra; we did not get that.

President.—But they had already given the order for the whole of their requirements.

Mr. Subedar.—I think the Board's recommendations should take the line of the Indian manufacturer being satisfied first. Tenders may be called for simultaneously and after the Indian manufacturers are satisfied the rest should go to the foreign manufacturer. I think the Railway Board ought to consider it.

President.—We started with the consideration of your proposal of having duties, and I was suggesting as a possible alternative that it might be expedient perhaps to secure the Indian manufacturer at least half the orders at a price which would be the equivalent of the foreign price *plus* the duty, because the duty, if it is adequate, is intended to enable the domestic manufacturer to compete against the foreign manufacturer. He is expected to underquote.

Mr. Subedar.—That is why we recommended a safe scale of duties.

President.—It comes to the same thing. Four of you combine and raise the price just below the c.i.f. price *plus* the full duty.

Mr. Subedar.—Then let the Railway Board pay us costs *plus* something. Let the cost be for production under the best conditions by the most efficient manufacturer. I would again say that if any fully equipped wagon works is idle for three months of the year, it absolutely destroys any advantage they may have gained by working for two or three years on a bounty.

Locomotives.

President.—As regards locomotives these are very interesting notes that you have written, Mr. Wright, but unfortunately we have not had the time

to go into them as carefully as we would have liked to. May I know how you stand in relation to this Company?

Mr. Wright.—As consulting engineer.

President.—How long have you been acting for them?

Mr. Subedar.—Mr. Wright has been known to our people for a long time, but he severed his connection with Messrs. Nasmyth Wilson & Company very recently. After he did that we asked him to advise us in the matter of locomotives and he has been associated with us since then as consulting engineer.

President.—There are two points which we would like to dispose of first. First of all, has your plant built any locomotives?

Mr. Subedar.—No.

President.—Therefore it is very difficult for anybody to say what it is capable of doing.

Mr. Wright.—You can estimate fairly closely what it can do.

President.—I think it must be very difficult indeed. In fact the Controller of Stores felt the same difficulty.

Mr. Wright.—The Controller of Stores is not a locomotive manufacturer; for outside men it is very difficult.

President.—Even for you it may not be quite easy to say what machinery kept in a box is capable of doing.

Mr Subedar.—The Controller of Stores has not asked us what the business programme of our Company is as regards the manufacture of locomotives and not having asked us it is not fair that he should say anything about it.

President.—What I am suggesting to you now is that there is no engineer who can definitely say what a plant is going to do unless he has got the whole of the plant there.

Mr. Wright.—With the plant at Jamshedpur it is possible to say that 80 per cent. of the locomotive and tender (as I have stated in one of my notes) will have to be imported from England in the early stage of locomotive construction in India and 20 per cent. can be done in India from Indian material.

Mr. Subedar.—In 1922 when the negotiation with the Railway Board broke off the shipping of further machinery from the United Kingdom was stopped and since then all our efforts have not borne fruit though we made several attempts to secure orders from the Railway Board.

President.—As you know, so far as our fiscal policy is concerned, it would be quite an exception for any industry to obtain protection before it came into being.

Mr. Subedar.—We cannot manufacture locomotives except on order for the Government and the railways.

President.—Quite, but Government must see that you are well equipped. Every other industry that has come before us had already started and some attempt had been made to manufacture.

Mr. Subedar.—We are not unwilling to have our programme of business stated to us by the Railway Board. If the Railway Board tell us that 'unless you do this, that or the other we won't take locomotives from you' we are quite prepared to carry out their wishes. They have not done that.

Mr. Mather.—That places a lot of responsibility on the Railway Board. That would mean that the Railway Board would have to say what machinery you should use and if there are any defects they will be responsible for the ultimate success of the whole venture, and you will say "we cannot operate successfully because we are not allowed to lay down the machinery we should have preferred."

Mr. Subedar.—We have a particular business programme. We propose to lay down a particular kind of machinery. If the Railway Board say that

this is not enough or that this is unsatisfactory or that we should do a lot more, then we are quite willing to expend the additional capital or to change the lay out or do any such thing which they require. But they have never examined our business programme nor have they indicated what they desire us to do before they place orders with us.

Mr. Mather.—Is this really a settled programme on the part of the Company and if so, has it been placed before the Railway Board?

Mr. Subedar.—No, it has not been placed before the Railway Board.

Mr. Mather.—So far as this programme is concerned the Railway Board had not had the opportunity of considering it.

Mr. Subedar.—It has been accepted in general principles by the Company. It is the Company's programme. We are placing it officially before you. It has not been placed before the Railway Board, but we would be very willing to meet the Railway Board in any details which they criticise.

President.—I must point out one general difficulty that we always have in all these matters. Even when a plant is working, it is really very difficult to know what its operating costs are. You know yourself how difficult it is in the case of your wagon plant. You have been working for more than a year. When a plant is not in being—the plant is not there in a complete condition and we are asked to estimate what is the amount of assistance required by an article manufactured out of that plant—do you think you are putting to us a very easy proposition?

Mr. Subedar.—I see the difficulty.

President.—On what basis can we possibly come to any decision as to the amount of assistance you require? On what basis can we do it? We have got, as you know, to give our reasons. We cannot say "let Mr. Subedar have 33 per cent."

Mr. Subedar.—I follow that.

President.—We have got to show: "Here is this particular article manufactured in this country. Such are its costs. The foreign article comes at such and such a price and this is the difference. We think the local industry ought to get so much." In your case on what are we to proceed except your estimates?

Mr. Subedar.—We felt that that would be the difficulty. For that reason Mr. Wright has worked out a scheme by which first of all he makes assistance given to us very strictly with the work done in this country.

President.—He says £50 a ton. How are we to know whether £50 is enough or whether it is too much or too little? On what basis are we going to accept £50? We don't know what your costs are going to be.

Mr. Subedar.—This £50 is suggested after a good deal of careful calculation. If you like we can give you the calculations on which we have proceeded.

President.—You have hardly reached a stage when you can definitely say that you require so much assistance really.

Mr. Subedar.—I think we can say very definitely that this is the minimum assistance which we do require.

President.—How are we to satisfy ourselves that that is what you require? We must have some basis to work on.

Mr. Subedar.—If you think it too little, we take the risk on ourselves. If you think it is too much, we respectfully submit that it is not.

President.—It is not advancing the argument any further.

Mr. Subedar.—I am prepared to give you the calculations on which we arrived at that with a further proviso that it should cover interest and depreciation on the outlay.

Dr. Matthai.—This is a problem to which the Fiscal Commission drew special attention. With regard to industries which have not yet come into existence, they have warned the Tariff Board that, as a rule, they ought to consider except in rare cases the question of protection for those industries whose estimates of cost have not been verified by actual experience. It is a point that the Tariff Board ought to take into account.

Mr. Subedar.—As to the verification of costs we are speaking with a certain very definite block of experience at our back both with regard to Kerr Stuart's and our consulting engineer. As for the industry coming into existence before any assistance could be given, I have said that we are in the vicious circle. We don't know how we could manufacture locomotives until the Railway Board place orders with us. When we felt this difficulty so acutely, we tendered from time to time since the last report without any question of bounty. In the one case our tender was out by about 15 per cent. and it was rejected. In the other case it was 20 per cent. out and still the offer was rejected. In the last tender we tendered on the basis of British prices *plus* the Indian charges. We were prepared to take business risks and take the order. We were prepared to take the order for 10 locomotives for the Assam Bengal Railway on the basis of British prices *plus* charges.

President.—What charges?

Mr Subedar.—The Indian charges which the Railway Board add in any case to the purchase of locomotives made abroad.

President.—Do you mean that you were prepared to accept an order on the basis of the Railway Board's price of a locomotive *plus* 15 per cent.?

Mr. Subedar.—Yes—we said as the matter was pending before the Tariff Board—we would take the order on that basis *plus* such protection as they may recommend. We took the risk of their not recommending any protection, because we felt that this is being constantly brought up against us that as we have not manufactured any locomotives, we have no right to ask for protection before we actually start. It is for the initial difficulty that we ask for protection.

Dr. Matthai.—May I suggest this point for your consideration? We administer state assistance in the shape of duties or bounties. For that it is essential that we ought to have some kind of estimate of cost which we could test. There is another kind of state assistance which might be rendered to an industry like yours and that is the assistance recommended by the Industrial Commission. When you speak of a guarantee or orders by the Railway Board that is a matter which as I look at it is somewhat outside the purview of the Tariff Board. It is a matter which you ought to take up with the Government of India in accordance with the recommendations of the Industrial Commission.

Mr. Subedar.—If the assessment of assistance is difficult—assuming for the sake of argument that it is, it is not difficult for you gentlemen to say, as you have said in the last report, what you think of the industry generally and if the other conditions are satisfied, the question of assessing the amount of assistance may be reviewed some time afterwards. There is 25 per cent. on fabricated steel. That gives us a basis to work upon. If you take locomotive as a very highly skilled and complex industry compared to ordinary steel fabrication, there is some basis. I don't think the fixing of the basis is such a difficulty.

President.—If we put a duty of 25 per cent. as on fabricated steel, there is no guarantee that you may not manufacture locomotives in Kerr Stuart's works and bring them out here.

Mr. Subedar.—If parts of locomotive are charged at same rate as whole, no such evasion can take place. We can then get benefit only on what we manufacture here.

President.—First of all there must be a *bonâ fide* attempt to manufacture the article for which protection is asked in this country. You are quite familiar with our procedure. What the Fiscal Commission said does not altogether rule out the grant of protection to an industry which has not come into being, but they certainly contemplated that before any protection, either in the form of duty or in the form of bounty, was given, the industry must have commenced, ordinarily speaking.

Mr. Wright.—We propose to do 20 per cent. of the work in India as a start.

President.—As you know the Steel Industry Protection Act contemplates that a substantial amount of Indian material and labour should be employed.

Mr Subedar.—For that purpose I may say that the locomotive industry is not one industry. It is 6 or 7 industries, each one of which is as much apart from the other as you can think of. Different kind of skill is required for them and the steel used is also in many forms. If we start with all the 6 or 7 different branches all at once, I think we would be attempting too much. We recognise that. What we propose to do is this: We have a nucleus of trained English labour. We shall start with one section in the first year, *i.e.*, about 20 per cent. When our English labour has trained some men here to carry that part out, the same nucleus of English labour will take us on to the next section. In the meanwhile we will have to import the additional plant and equipment. That is for another 20 per cent. In that way we hope to work up to 80 per cent. local manufacture in 5 years. It wants a five years' composite programme and I quite recognise that other questions of state policy are involved except what come within the purview of the Tariff Board. The Railway Board would not take the next move without the Tariff Board and it now appears that the Tariff Board would not take the next move without the Railway Board having placed orders with us. We are thus moving in a vicious circle and that is not fair to us as we started in response to an explicit invitation from the Railway Board.

President.—We are not concerned with what the Railway Board do. What we are concerned with is that we must have sufficient information to guide us. That is the point.

Mr. Subedar.—You have not issued any definite questionnaire on the locomotive issue to indicate in what respects you require information. Should you do so, we would certainly give you all the information you require.

President.—It is hardly fair to say that we had not issued a questionnaire considering the fact that you yourself applied for a postponement and you suggested that this should stand over until the middle of August.

Mr. Subedar.—Because we were getting out additional information that we thought relevant from England.

President.—As a matter of fact we have issued a questionnaire to the railways, but we have not issued one to you because you are not in possession of all the information.

Mr. Subedar.—I said that we were not in possession then.

President.—The last letter was received by us on the 9th August only. This is the most important communication we have had. Do you think that we must give up all our other work and issue our questionnaire as soon as we hear from you.

Mr. Subedar.—I don't suggest that. We have put forward so many factories as we thought would be relevant. If you think any further particulars are wanted, we are quite prepared to give them to you.

President.—The whole point is you are not completely equipped to build locomotives.

Mr. Subedar.—We are equipped to carry out a certain business programme which we have and we are quite prepared to go ahead if the Railway

Board approve of it. If they don't approve, it is for them to say so. We are equipped to carry out 20 per cent. of the manufacture to start with and we think further that it would be very unwise to attempt in the first year to do anything more than that at once.

Mr. Mather.—You just told us that even for that 20 per cent. of the manufacture, you would have to spend another £25,000. That means you have not got a complete plant to do even 20 per cent.

Mr. Subedar.—We have some part of it.

Mr. Mather.—Not the whole of it. At the present moment you cannot do even 20 per cent.

Mr. Subedar.—We suspended further expenditure in 1922, when locomotive negotiations broke off with Railway Board.

Mr. Mathias.—Within what time would it be possible for you to turn out locomotives at your works?

Mr. Subedar.—On the basis of 20 per cent? It would take six months to put all machinery in its place and a further 8 months for the first locomotive to steam away.

Mr. Mathias.—You have stated that you are not working up to your full capacity in the matter of wagons. You are only turning out 800 and you wish to increase your equipment and train your men to turn out 1,200 wagons. If in addition to that you have to extend your works further and get more machinery for locomotives, would it not be a matter of very considerable time?

Mr. Wright.—They are two separate problems.

Mr. Mathias.—But the same Company is undertaking the work.

Mr. Wright.—The operations are different and separated from each other in laying out the works. (Showed a blue print of the lay out of the works).

Mr. Mathias.—Would you be able to undertake the manufacture at the outset of 15 locomotives?

Mr. Wright.—Yes. It is the only possible way of starting the industry.

Mr. Mathias.—But that would not be economic.

Mr. Wright.—That would not be economic by itself, but with the wagon work taking some charges, it is the only possible way of getting the industry started.

Mr. Mathias.—So it depends on the wagon industry whether it can carry the loss.

Mr. Wright.—Yes. The problem is easier now to deal with than it would be if the Company confined itself to locomotives alone.

Kerr Stuart's interest in the Company.

President.—Kerr Stuart's are interested in this Company.

Mr. Wright.—Yes.

President.—Would it be possible for them to get an order for locomotives in the ordinary way and build part of them here in order to convince the Railway Board of their ability to build locomotives?

Mr. Subedar.—We have not tried to do that. Whatever order they get at the other end, they get for their own large works.

President.—If it was merely a question of convincing the Railway Board .....

Mr. Subedar.—We would attempt to do it if possible, but that would be by the side door. By the front door we are asking the Railway Board to place orders with us, and that would be best way of doing things and less open to comment.

President.—If you came up with the cost for 20 per cent. that might be a way of helping us to determine the extent of the assistance you required.

Mr. Subedar.—When the locomotive industry was started, the Government of India gave out that they were anxious to see the locomotive manufacture started in this country. They knew that the start could only be made at the final or erection stage involving only some percentage of the work here. They wanted an enterprising firm to start. That was their policy then. Now they seem to find it inconvenient.

President.—That is past history.

Mr. Subedar.—I am only saying that these things indicated their mind and their subsequent attitude shows a considerable amount of uncertainty. In order to induce more money to be put into the business they must indicate what they wish to be done. It means that we have to put in another £25,000 and at present do not know when the Railway Board will know their own mind on locomotives.

President.—We are just now on the question of equipment. We shall deal with the question of demand separately. Your contention is that this work can be done. If Messrs. Kerr Stuart's are interested in the promotion of locomotive building industry in this country, the simplest thing for them is to say "we will take orders for locomotives and do 80 per cent. of the manufacture in England and 20 per cent. in India," and so on. In that way they might be able to make out a case.

Mr. Subedar.—I am not sure whether we may not be obliged to do that. But, it presupposes that the initial heavy cost would have to be borne by way of loss either by Kerr Stuart's or by this company and it is to cover the initial heavy cost that we are asking for protection.

President.—Every industry has got to face it.

Mr. Subedar.—If we have to face it, we would face it.

President.—Other industries have faced it. It is merely a suggestion that has occurred to me.

Mr. Subedar.—I follow. But if Kerr Stuart's do not get an order that method may lead nowhere.

President.—In that case, you can say to the Railway Board "Here are Kerr Stuart's. They brought out these locomotives. 20 per cent. of the work on these was done in India and in course of time they expect to do in this country nearly 60 per cent." Then, there may be something on which we can go. We can estimate what the average cost is and apply some other standard by which we may be able to ascertain the assistance the industry may require in the initial stage. That might give us something to work on.

Mr. Subedar.—If the question of protection to the locomotive industry is dealt with now by the Tariff Board, the exact amount of assistance can be determined afterwards.

President.—The Tariff Board makes no proposals of that kind. The Tariff Board has got to tell the country that protection is going to cost so much and the Board must be in a position to say that. So far as we are concerned, we cannot put an indefinite burden on the country.

Mr. Subedar.—We have worked out a very moderate scheme of protection and it is for you to accept it with such critical examination of it as may be necessary and with such additional information as you may desire.

Dr. Matthai.—Have you any idea whether the price of imported locomotives has gone up?

Mr. Subedar.—The price of imported locomotives has gone down during the last 5 years.

Dr. Matthai.—Since October 1925, has it gone down or gone up?

Mr. Subedar.—The new types which the Railway Board have asked for are in small numbers, but because of the larger dimensions they may cost more.

Dr. Matthai.—In Mr. Wright's note, he takes a typical metre gauge locomotive, for which a total cost of about £9,000 is given. That would be for narrow gauge, I take it.

Mr. Subedar.—Not narrow gauge but broad gauge—about £9,000 for a broad gauge engine and £5,000 for a metre gauge engine.

Dr. Matthai.—If you look at paragraph 19 (of Mr. Wright's note) where you give an adjustment of figures in order to arrive at the Indian cost, you will see that you work out the final price of a metre gauge engine as £9,092.

Mr. Wright.—That is the metre gauge locomotive also mentioned in para. 13.

Dr. Matthai.—It is really on the difference between that figure and about £6,000 which you take as the c.i.f. price that you suggest £50 per ton as a reasonable amount to start with for the first year. From some figures that we have I find that at present the c.i.f. price is about £4,000.

Mr. Wright.—What figures are they?

Dr. Matthai.—For October 1925.

Mr. Wright.—These engines have not yet been delivered to them.

Mr. Subedar.—This is the new standard type. What you mention is the old type.

President.—There is one point I want to ask you before we pass on to the question of demand. Supposing we take the c.i.f. price at £9,000 and 20 per cent. is to be manufactured in India. If you get a bounty on 20 per cent. of the work it will be 20 per cent. on £9,000, that is £1,800. A bounty of 25 per cent., on £1,800 will come to £450.

Mr. Subedar.—That is how it is worked out.

President.—Somebody has got to see that you do 20 per cent.

Mr. Subedar.—The Indian Stores Department can see to that.

President.—Someone must remain there and estimate whether on each order 20 per cent. of the work is done or not. It is very difficult to say what 20 per cent. is in a fabricated work.

Mr. Wright.—20 per cent. by tonnage.

President.—You may get out the whole thing fabricated and simply rivet it up here and say it is 20 per cent. In fabrication it is very difficult to find out whether 20 per cent. is done or not.

Mr. Subedar.—A locomotive is manufactured to definite specification.

President.—That is a different matter. I am only telling you that it is difficult to find out whether 20 per cent. is done or not in fabrication work.

Mr. Wright.—It is quite a simple proposition as regards locomotives with Inspectors on the spot.

President.—What do you call fabrication?

Mr. Wright.—Completely finishing it.

President.—Why do you say that? You may finish it to the extent of 80 per cent. there and yet say that you are going to finish it here. I don't say that you cannot do it. But that is the difficulty about 20 per cent.

Mr. Wright.—Not if you lay down exactly what items are comprised in the 20 per cent.

President.—What can be laid down? The whole question of 20 per cent. manufacture will have to gone into very carefully and certainly it could not be dealt with merely by stating that if 20 per cent. of the manufacture is done in India, such and such a bounty shall be paid. That would be altogether impracticable.

Mr. Subedar.—It could be made more definite in the specification. Tata's material which we buy would be raw material largely.

President.—If you say that 20 per cent. of unfabricated Indian steel shall be used, it is quite a different proposition.

Mr. Subedar.—It practically comes to that.

President.—Not necessarily.

Mr. Subedar.—We say 20 per cent. of the finished article because the wastage is enormous in a locomotive.

Mr. Wright.—I took 20 per cent. of actual finished parts of the locomotive and tender.

President.—Twenty per cent. of the weight of the material which is of Indian origin.

Mr. Wright.—Yes. Plates and castings are made in India. There is really no technical difficulty.

President.—If you say that you will use Indian material to the extent of 20 per cent. of the finished material, it may not be so difficult, that is to say if it requires 25 tons of unfabricated steel to make 20 tons of finished material, you will use 25 tons of Indian material.

Mr. Wright.—That is what is intended in that letter. We would have no objection to such a specification. I have been classifying the component parts of the locomotives by prices more or less in progressive stages of British and Indian manufacture. There are certain parts of locomotives in which the work is allied to wagon building. Spring hangers, brake gearing, tender, etc., all these are allied to wagon work. If they started doing them they could turn out 20 per cent. of Indian material.

Dr. Matthai.—If you did 20 per cent. of the work here, I suppose that 20 per cent. would mainly represent work on what you call the tender and the frame.

Mr. Subedar.—Yes, also smoke box, chimney, clothing, brake gear, etc., which are less highly skilled work than other components of the locomotive.

Dr. Matthai.—Would not that come under ordinary fabrication work? Is there anything particularly characteristic of the locomotive industry in that part of the work?

Mr. Wright.—I would not agree to that at all because the tender is a higher grade of work than a wagon. It is heavier. We have to use thicker plates.

Mr. Subedar.—No one who has no experience of the locomotive industry can do these tenders, not even from the drawings.

Dr. Matthai.—That would be the nearest to the sort of work which is now being done in the locomotive, is that the point?

Mr. Wright.—You have first got to train the staff so that they could erect a locomotive from the parts as delivered direct to the erection shop. You import 80 per cent. from England and make 20 per cent. here and then they both converge in the erection shop. It is a piece of highly skilled work to erect partly built locomotives in India quite apart from making them. Your first step in training a locomotive staff is to teach them to erect a locomotive as you get the parts. Make in India first of all the easier pieces and gradually get on to the difficult portions until you eventually manufacture in India and deliver to in the erection shop, the whole of the parts which will be made in India by stages.

Dr. Matthai.—Ultimately do you foresee any stage when you can do more than 50 per cent.

Mr. Wright.—I see a stage when we can make 85 per cent. which is the proportion an English or Continental locomotive builder makes in his own works.

Dr. Matthai.—Within what time?

Mr. Wright.—Within 5 years according to this programme?

Dr. Matthai.—Would you reach 85 per cent. in 5 years?

Mr. Wright.—Yes.

Mr. Subedar.—The rate of progress depends on the orders placed with us and on the desire of the Railway Board. If the Railway said 'you must reach it in three years' we would do so. It is for the Railway Board to take the next move.

Dr. Matthai.—Suppose we take the line that the locomotive industry is to be assisted because it is an industry of national importance, that is to say, in times of crisis it is of great importance to the country that there should be a locomotive industry. If you never reach a stage when you can make the whole of the locomotive industry in the country—even in a country like the United Kingdom they do only 80 to 85 per cent. in the locomotive works and the rest they buy from specialist people—the country would never be self-supporting.

Mr. Wright.—There is no reason why this country should not eventually make the whole 100 per cent. If you get a locomotive industry started, you are bound to encourage other allied trades to come in such as tyre and axle, tube and other specialist manufacturers.

Dr. Matthai.—How much of the locomotives do they import at Ajmere?

Mr. Wright.—About 50 per cent. is imported. They import acid steel plates for the boiler and the copper plates, tubes, tyres and axles in the rough.

Dr. Matthai.—The additional equipment that you require at Tatanagar would be mainly for a boiler shop and foundries.

Mr. Wright.—Yes, and increased machine shop facilities.

President.—As far as I can understand your position is simply this: so much of locomotives can be manufactured in the country, more or less it is fabricated steel, and on that you should get assistance.

Mr. Subedar.—Yes.

President.—The fabricated steel industry does not necessarily get 25 per cent. on fabrication.

Mr. Subedar.—We would urge that a locomotive or even the parts of a locomotive involve greater skill than ordinary fabrication.

President.—Possibly, it is more expensive. Therefore the amount of protection goes up on an *ad valorem* basis. If ordinary fabricated steel costs Rs. 100, 25 per cent. on that is Rs. 25. The same kind of fabrication in a locomotive costs Rs. 200 and 25 per cent. on that will be Rs. 50.

Mr. Subedar.—For purposes of comparison the locomotive sales, in the United Kingdom, work out to about £60 a ton as against fabricated steel which would work out to about £10 a ton.

Mr. Mather.—Fabricated steel is not so cheap as that. Moreover, there are many items in a locomotive which are not steel.

Mr. Subedar.—I was only comparing how £60 as the average price of fabrication in a locomotive is very far above the price of fabricated steel.

President.—That may be quite possible, but there is one difficulty. It seems that somebody on behalf of the Railway Board has always got to be there.

Mr. Subedar.—You can have somebody located there in the same way as Indian Stores Department inspectors are located at Jamshedpur for the purpose of rails.

President.—It is not the same thing when you say you must use 25 per cent. or something like that. It means that he has got to go into greater detail as regards inspection.

Mr. Subedar.—An inspector of locomotives has got to be a very skilled engineer.

Mr. Wright.—It is really an allocation between the British and Indian made parts.

President.—You start from Indian raw material and manufacture it here and then as you go on probably you find something has to be manufactured abroad; it is then that the difficulty would arise as to how much is of Indian manufacture and how much is foreign. If you manufacture it completely from Indian material that difficulty would not arise.

Mr. Wright.—You know the actual finished weight of the locomotive parts that are made in England. It would be inspected by the Railway Board's consulting engineer, and when it is shipped you would know there are so many tons of finished parts and the balance remaining from the total finished weight of locomotive parts is what is made in India.

President.—There are other considerations. You have your works at Jamshedpur and you have got to take your locomotive from the docks to Tatanagar. That would mean a considerable amount of money in freight.

Mr. Subedar.—About £200. The cost of delivery is £66 which diminishes to £9 in the fourth year; that is reckoning at full rates.

President.—I think you must send in this statement formally with six copies.

Mr. Subedar.—We shall.

President.—You want to start with a unit of 15 locomotives?

Mr. Subedar.—We have squeezed it down as low as possible.

President.—Rising to 50 and then to 100?

Mr. Subedar.—Yes, eventually.

Dr. Matthai.—Would 50 per cent. of 50 be an economical output?

Mr. Subedar.—If we establish it section by section it would be so.

President.—How many types would you require?

Mr. Subedar.—The Railway Board now only have 8 types, five for broad gauge and 3 for metre gauge.

Mr. Wright.—It does not make the slightest difference whether they want one type or five different types so long as they come through in batches of 10 or 15.

Mr. Subedar.—They will not want only one locomotive of one type.

President.—What is the smallest unit that it would be economical to make of any one type?

Mr. Wright.—I should say 10.

Mr. Mather.—For anything more than that it would pay you to make new jigs, etc.?

Mr. Wright.—Yes, new jigs and dies, templates, blocks, etc.

President.—As regards locomotives that is one of the points on which we had some difficulty last time. Even now the position is not very clear. Mr. Wright points out very rightly in his second note—"I must however frankly indicate to you that I think it very dangerous for your Company to incur any additional outlay of any kind until the situation is very clearly and definitely settled between yourselves and the Railway Board." Then again in paragraph 17 he says:—"Such future programme should include an estimate of the reasonable requirements for locomotives in this country year by year." That the Railway Board is not just now in a position to say. I may tell you briefly what they have stated. They are trying these eight different types of locomotives and they have called for tenders for altogether 93. They want first of all to get these locomotives built, then they say after they have arrived here they want to see how they actually do on the line and when they know the results then they would decide whether any of these types should be adopted. Then they would consider how many locomotives they would require in a particular year. That is the position. It is just possible that they may reject all these types or they may accept them with modifications. In any case they do not think they would get any substantial

results before 1928-29 and they will therefore have no orders to place—that is what they definitely state—until these locomotives have arrived and they have got substantial results. The nett result is that no orders can be placed until 1928-29.

Mr. Subedar.—That is the financial year 1928-29. If they were thinking of placing orders they would probably have to place them by the middle of 1927.

Mr. Mather.—The Railway Board contemplate having these trial locomotives sufficiently long on the line for working trials before ordering further quantities of the same types.

President.—They do not expect delivery to be completed before that date. By the middle of 1927 they expect delivery to commence and they will go on delivering until 1928. Then after that they have got to run them on the line.

Mr. Subedar.—It would also take us six months to start after any definite arrangement is reached with the Railway Board.

President.—The Railway Board cannot make any arrangements.

Mr. Wright.—They would probably want a reasonable number each year for replacement, considering their total locomotive stock of 6,000.

President.—It all depends on their extension programme. On the other hand, I think, they expect that some of the locomotives from the Bombay side would be released by electrification and now the policy is to make locomotives last as long as possible.

Mr. Subedar.—Those locomotives on the Bombay coast would not be of much use in other parts of India, as they are chiefly designed for heavy ghat traffic. I think. I take it the Railway Board are of opinion that they would not come in the locomotive market for as large quantities as they used to do before. How far the quantity could be reduced they do not know, but our opinion is that even this reduced quantity under our present programme would make it feasible for us to come to some suitable arrangement which would be mutually acceptable, and I would further say that in the moderate scheme which we have thought out as stated in Mr. Wright's letter, we are not concerned with the Railway Board's larger policy about locomotives so long as they give us 15 locomotives to start with of one type. We won't worry about their policy further nor about the price. Under the bounty scheme the Railway Board would be free to place orders at the English price *plus* Indian charges and the bounty is given on it, and any recommendations which you, gentlemen, might make would go automatically to the Industries section. That was another difficulty which we have felt in the case of wagons very much. The Railway Board want to buy as cheaply as possible and in order to obtain a cheaper price, they knock off the bounty. That is why we have proposed the simplest scheme possible in order not to get in the way of the Railway Board's bigger programme at all. I should think their demand whatever it is would make it possible for them to place with us something like 200 locomotives spread over a period of five years which would come to about 40 on the average.

President.—The position is that before 1928-29 they do not know really how many locomotives they would require nor are we in a position to say what the costs are likely to be.

Mr. Wright.—They probably know now.

President.—But the costs, as you know, so far as any form of steel is concerned, are not the same for two days.

Mr. Wright.—These are exceptional conditions.

President.—Every time we said there were exceptional conditions and three or four times we reported that prices had reached the bottom; we are not going to make any more prophecies if we can help it.

Mr. Subedar.—In view of the fact that this company has waited for four or five years in the hope of getting locomotive orders, it would not make any difference if it is a matter of another year or so, and we request the Tariff Board to go as far as they can in stating the relative position between us and the Railway Board and the general policy in the matter of locomotives. If it is found difficult to assess the exact amount of assistance to be given then you may just leave that small issue over and we may take any just figure which the Railway Board would like to fix. The Railway Board have competent men to assist them in deciding that.

President.—If you were to receive orders to deliver your first 15 locomotives in a particular financial year you would have to get the order at least six months before the beginning of the official year.

Mr. Subedar.—Yes. I think we would want about six months to complete the installation of all the additional machinery, but some portion of the works would start almost immediately.

Dr. Matthai.—What about labour? Could you put that together in six months?

Mr. Subedar.—We can get enormous amount of labour in this country for both our activities. Hitherto the larger locomotives were not coming in fully erected because the crane capacity was not as large, so there was a certain amount of labour knocking about in India. Further, Locomotive workshops are producing that class of work in spare parts and they are therefore quite familiar with this class of work. There is enough trained labour in this country to adapt themselves to new manufacture. If they are producing spare parts they can produce full locomotives in our works guided by British foremen.

President.—I would like you to understand the position. Of course it is not a question of blaming anybody, but we have now reached a stage in our enquiry when it is not possible for us to take any evidence at present in any great detail. We were not in a position—it was not your fault—to get all the information in May and June when we really wanted it in order to enable us to take up this question along with the other industries. What I am suggesting is this. We must first finish our reports on the other industries.

Mr. Subedar.—Yes, the other industries might be disposed of first.

President.—Then as soon as we are more or less reasonably free to take this up, we shall do so, but you must take your chance of our report reaching in time to the Government of India to take action during the next session.

Mr. Subedar.—I follow that.

President.—They may say it is too late. They may reject it on other grounds.

Mr. Subedar.—If you like we are quite prepared in the interval of next three months to prepare any minute detail that you require and appear again.

President.—It is quite likely that it may be necessary. We have not had time to consider your letter of the 9th August 1926. When we received it, we were busy with the Steel Industry.

Mr. Wright.—We also would like to know what these prices are for these new engines just purchased.

Mr. Subedar.—I would say that Mr. Chase, Chief Mechanical Engineer, Railway Board, was sent down specially at the instance of the Railway Finance Committee to the United Kingdom to survey the conditions of locomotive industry. He has submitted his report. It must have enormous bearing on any business programme that we might make. If we saw that report, we might modify our programme.

President.—You must get it from the Railway Board.

Mr. Subedar.—The Railway Board would not give it to us. We have made a formal request which they have rejected. You gentlemen ought to see the report.

President.—The Tariff Board generally sees what it considers necessary.

Mr. Subedar.—I think the report is made to the Railway Board. The report ought to be made available to the locomotive manufacturer in this country.

President.—That is for you to discuss with the Railway Board. You understand the position that at this stage it is not possible for this Board to go into your case any more fully than it has more done and that we shall consider it fully when we have more materials.

Mr. Subedar.—Would you indicate to us what additional materials you would require?

President.—After we have considered this communication, if we find that the materials are not adequate, then obviously we shall have to ask you for more materials.

Mr. Subedar.—I agree.

President.—In any case you will have to take your chance of our report reaching the Government of India in time.

Mr. Subedar.—The Railway Board I understand are not going to place any orders for locomotives next year, so I think the Railway Board will not have any objection. From our point of view we want the position to be thoroughly examined once for all by the Tariff Board. We would like it for our own guidance as producers and 3 or 4 months' delay would not matter to us.

President.—Would it not be better for you in that case to renew your application after the new engines have arrived when you will know more about them?

Mr. Subedar.—We would much prefer the Tariff Board to go as far as they can now. If the Tariff Board accepted the principle of protection except on the question of demand.....

President.—We have not got much more information on that point.

Mr. Subedar.—The Railway Board's estimates were hopelessly out.

President.—We went into that question before. So far as that point is concerned, do you think that we have made much advance?

Mr. Subedar.—I think the Railway Board thoroughly miscalculated their requirements.

President.—Supposing all that is granted, it does not advance the position.

Mr. Subedar.—Had the Railway Board calculated more correctly their requirements, we would have got protection in 1924 and we would have been actually delivering some locomotives.

President.—It is no part of our function to say what they might have done. We are only concerned with the present position. I am asking you whether this Board so far as this aspect of the question is concerned is in a better position than it was two years ago.

Mr. Subedar.—I think this Board is in a better position now than it was two years ago, because so many things have occurred in the meanwhile.

President.—I am asking you about the demand.

Mr. Subedar.—You are in a better position.

President.—In what way?

Mr. Subedar.—You are in a better position in two respects. In the first place the Railway Board's calculations about their demand have not been proved correct and therefore you would be entitled to doubt them, if they

said they would not come in the market. In the second place owing to the wagon activities of our company, we are now offering to start at the other end of the stick with such a small quantity that the question of the demand is not so serious as it was before. It is impossible for Railway Board to say that they cannot take 15 locomotives.

President.—If your industry is to do any good at all, the demand must be consistent, even if it is a small demand. Until we are in a position to see that that is the case, do you think that it would be safe for you or for us or for anybody to launch an industry like this? From that point of view the position is not very much better than before, is it not so? Supposing the Railway Board said " in the first year we would purchase 50 locomotives, in the 2nd year 5, in the third year 200 and in the 4th year none at all. That is not the sort of thing that is going to help you. It is for this reason very essential, is it not, that we should satisfy ourselves that there will be at least a demand for locomotives of such quantities as would enable the industry to be built up.

Mr. Subedar.—Our contention will be that there is enough demand in this country to-day for locomotives to enable us to start on a very modest programme which we have made and if the Railway Board are not going to make in the next few years any large demand we are not offering to give them in any large quantity. I think that this is an ideal moment for starting, if other conditions are found satisfactory, by both sides. The postponement of the enquiry for two or three years means the postponement of the negotiations with the Railway Board for two or three years. When the Railway Board comes for 150 locomotives in the market, then we would have again to start on a modest scale.

President.—I am not suggesting a delay as long as that, but a delay of some months would permit us and you to see what the position of the Railway Board is as regards their requirements of locomotives. That is essential. After that if we are satisfied that the other conditions exist which would make it expedient for this country to have this industry established, then we could make proposals for it.

Mr. Subedar.—It is important for us to ascertain what the approximate demand would be in the next 10 to 20 years and also to what extent our Company is expected to supply.

President.—I have explained to you the Railway Board's position to-day.

Mr. Mathias.—And the question of the types too.

Mr. Wright.—Because they have now standardised to 8.

Mr. Subedar.—It is much easier now than it was in the previous enquiry, because they have since reduced the number of types in all the gauges.

Dr. Matthai.—Could you tell me what kind of advantage you get by your connection with Messrs. Kerr, Stuart and Company?

Mr. Subedar.—If we tried to start absolutely on our own considering the amount of work that has to be imported we will have to go to the open market without any facilities, whereas because of our connection with Messrs. Kerr, Stuart and Company, we propose to repeat what we did in the case of wagons. When we got the first wagon order we straight away placed 50 wagon sets with Messrs. Kerr, Stuart and Company and got all the jigs, dies, patterns, etc., out for the remainder, which we made here. In the same way things like patterns, jigs, dies, etc., for locomotives, we propose to get from them.

President.—It is a question of technical advice mainly.

Mr. Subedar.—Yes. Also as regards labour we get European labour at very reasonable rates merely because their jobs are open at Home. Whenever this country doesn't suit them, we send them back. Their jobs are open there and they take a visit to this country more in the nature of a holiday. Whereas if the Company was working isolated in this country, it would

have to pay 50 to 75 per cent. more as an inducement for the men to come out here. We have these various advantages in our association with the home company.

Mr. Mathias.—What financial interests have Messrs. Kerr, Stuart and Company, in your firm?

Mr. Subedar.—They have at present controlling interests.

Mr. Mather.—I take it they have largely supplied the finance which has enabled you to undertake the manufacture of wagons last year.

Mr. Subedar.—Yes.

President.—Supposing you get an order for 20 locomotives and on that you get a bounty on 20 per cent. of the manufacture so many hundred pounds, criticism may be made that as regards 80 per cent. the order goes to Kerr, Stuart and Company.

Mr. Subedar.—Not necessarily. I may say that we get the benefit of a very close cut price for all the things which we get from outside. Most of our things for wagons are from Cammel Lairds. Kerr, Stuart did make them at one time. Cammel Lairds cannot quote lower.

President.—But the outside world doesn't know it.

Mr. Subedar.—As for the locomotives, if it is the contention of the Railway Board or any body else that Kerr, Stuart's have got an unfair advantage, we would not mind if the 80 per cent. of the work were supplied to us by the Railway Board. In fact the Railway Board could make a better bargain and should they buy this whole lot of locomotive boilers, etc., and give it to us we would certainly prefer it.

Mr. Mather.—In the same way as they supply wheels and axles for wagons.

Mr. Subedar.—Yes. I mean to say we are not making our programme dependant on the condition that the balance of the order ought to go to Messrs. Kerr, Stuart and Company.

Mr. Subedar.—The position is this. Kerr, Stuart's are a limited Company owing large interests in this country. That ownership is only to-day. To-morrow the ownership may be transferred to somebody else. They may have sold out their holding in the Peninsular, even while we are talking. This Company is absolutely independant and willing to negotiate for itself and not for anybody else.

Dr. Matthai.—Your capital is entirely rupee capital.

Mr. Subedar.—Yes.

President.—How would you fix the price? Supposing you got a bounty on certain percentage of the manufacture, how would you quote?

Mr. Subedar.—The order would be placed with us at the lowest British price.

President.—*Plus* the bounty?

Mr. Subedar.—*Plus* the Indian charges *plus* so much per ton on the Indian part of the work done here under strict supervision and specification. It is a simple scheme. It saves the Railway Board any attempt to ascertain Indian prices. In the case of wagons even where there are three or four manufacturers it is so difficult.

President.—That means that there would be orders to be placed abroad.

Mr. Subedar.—Yes.

President.—We should like to consider this point. It may be quite possible that they call tenders for 80 per cent. rest of the work to be done here. As regards their orders they may say: "We want 100 locomotives. We want 80 locomotives complete and for the other 20, parts to the extent of 80 per cent."

Mr. Subedar.—Yes. We would prefer it because the Railway Board could always buy cheaper than any private individual as their orders are large. They have got prestige and they are good paymasters, *i.e.*, there is no risk about money.

Mr. Mather.—They can buy more cheaply than you?

Mr. Subedar.—Yes.

Mr. Mather.—It is a scheme which we might be able to consider. We do not find the materials adequate at present.

Mr. Subedar.—We are ready to supply you any figures you want.

President.—As I say it may be too late.

Mr. Subedar.—The Railway Board are not anxious to have the report now.

President.—This locomotive section we could issue later. You have no objection to the delay of a few months.

Mr. Subedar.—Nor to appearing before you again to satisfy you on any point which may arise hereafter.

Mr. Mathias.—You say "The heavy burden which the country would carry according to paragraph 18 of the Tariff Board's report on locomotive building industry, is as much there in the activities of State workshops as in that of private enterprise. I don't follow the point there.

Mr. Subedar.—The suggestion was made in the Tariff Board's Report that they could not recommend protection if the demand was very small for locomotives as it would mean an uneconomic production. We are saying that the Bombay, Baroda and Central India Railway are now making 15 to 20 locomotives every year. For the last 15 years they are doing it. If 60 was uneconomic because it would increase the cost, then 20 is all the more so and if the burden of 60 would fall on the country if protection were given to us, the burden of 20 or 25 certainly falls on the country.

Mr. Mathias.—On the country or on the Company?

Mr. Subedar.—On the Company in the first instance, but I think under the contract $\frac{1}{10}$ ths would be borne by the country.

Mr. Mathias.—Your argument as regards the State Workshops and the Railway Workshops Committee is defective, because the Bombay, Baroda and Central India Railway is not a State Railway and the Ajmere works for the manufacture of locomotives is not a State workshop.

Mr. Subedar.—When we wrote this paragraph, we hadn't read the Committee's Report, but having read that, I would say further that if the manufacture in this country of locomotive parts is uneconomic, then the State Workshops are manufacturing them at present and claiming that it is not uneconomic.

Mr. Mathias.—Do you mean the Bombay, Baroda and Central India Railway?

Mr. Subedar.—The East Indian Railway and the Great Indian Peninsula Railway and other railway shops make parts for locomotives to the extent of Rs. 1½ crores a year and that production is claimed to be very economic, to be even cheaper than what they could buy at from the United Kingdom. If that is so, the manufacture of locomotives at our place is only one step in advance, *viz.*, taking all these spare parts and putting them together. The statement that the manufacture of locomotives would be uneconomic and could never be done would be wrong, if we believe their report. On the strength of the statement that they could do cheaper, Government have sanctioned crores of rupees for extensions.

Mr. Mathias.—Has that been sanctioned?

Mr. Subedar.—Yes.

Mr. Mathias.—Since the issue of the Committee's Report?

Mr. Subedar.—I think the Railway Finance Committee must have met by now and they must have sanctioned it.

Mr. Mathias.—You have no definite information?

Mr. Subedar.—We have an official communication from the Railway Department of the Government of India that they have accepted the findings of the Railway Workshops Committee's Report.

Dr. Mathai.—Both these estimates of 200 and 50 have come from you.

Mr. Subedar.—I am afraid I must explain that the estimate of 200 which was put forward under different circumstances and which the Company now recognise was not correct. We no longer claim that 200 is the figure we can start on, but if the demand of the Railway Board is up to 200 and if it is asked of us " will you put down the necessary equipment and manufacture 200 " we are quite prepared to do that. Two hundred is not the starting point any more with our waggon activities. I personally think that we were mistaken in putting that figure as absolute minimum. That proposal has however done no harm except to ourselves as if we had regarded sixty a satisfactory number to start on we could have been manufacturing to-day. The position to-day is very different.

President.—We are very much indebted to you, gentlemen, for rendering us assistance in the examination of a somewhat difficult question.

2. THE INDIAN STANDARD WAGON COMPANY, LIMITED, AND BURN AND COMPANY, LIMITED.

A.—Written.

(1) *Representation, dated 18th May 1926.*

We have pleasure in forwarding herewith six copies of our written statements regarding the following industries:—

Wagons.
Carriage Underframes.
Wagon and Underframe parts.
Fabricated Steel.
Points and Crossings.

We understand that you do not intend to deal with shipbuilding at the present enquiry and we have therefore forwarded no written statement regarding that industry.

WAGONS.

The Fiscal Commission in section 97 of their Report lay down as essential three conditions that should govern the grant of protection to any industry.

But now we are not asked to justify a grant of protection but the continuance of the grant, and we therefore do not propose to reiterate the arguments and facts we have from time to time put forward to shew that the wagon industry satisfies those three essential conditions.

The function of the present Tariff Board enquiry is discussed in sections 117 and 118 of the Fiscal Commission Report, in which the Commissioners state that protection should be withdrawn from those industries which have not fulfilled the expectations on which protection was granted. Those expectations are indicated on page 55 of the Fiscal Report, as follows:—

(1) That in those industries in which large scale production can be achieved increasing output should mean economy of production and

(2) That there should be a probability that in the course of time the whole needs of the country should be satisfied by the Home production.

If we can show that we have fulfilled these two expectations we submit that we have justified the claim that protection should be continued.

We beg to quote a passage from a speech made by The Honourable Sir Charles Innes in the Legislative Assembly on the 17th February 1926.

> "It is a fact that in the last two or three years these wagon firms have been able to increase their output in a very remarkable way. We have already placed orders last November for 3,200 and the amount of assistance is now going down sensibly until it has reached a bounty of Rs. 228 per wagon."

We have been able to earn this tribute partly because the Government, since the advent of the bounty scheme, have given us an opportunity of exploiting the economies of large scale production by placing with us relatively large orders, and also the orders have been of one type.

This has strengthened our position as purchasers of raw material, and has tended to bring us a little nearer to the fortunate position of Home Manufacturers who have a world-wide market and who buy their raw materials in quantities so large that they can get terms far more favourable than those that we can command.

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For example in the case of the vacuum brake work it will be recalled that in our evidence given before the Board we stated that the British Manufacturers procured their fittings at a less price than we could obtain. Another feature which has enabled us to purchase fittings much more cheaply is that we have been able to place axle boxes, buffers, solebar, stiffeners, springs and spring steel on the Continent. This source of supply has only become available since the arrangements by the Indian Stores Department were made for the inspection of such fittings in Europe. It must be remembered that if this source of supply is closed to us by the Railway Board specifying that only British material has to be used the prices will automatically increase.

The second result of our obtaining larger orders and greater output is that the Overhead Charges per wagon have been reduced; but we regret that this course of economy has not yet been fully appreciated by the Government.

By gradual though constant additions to our plant we endeavour to expand the capacity of the works and when quoting for wagons we estimate the capacity of the plant by past performances modified and improved by the various additions made since last quoting; the Overhead Charges to be included in the price per wagon are ascertained by dividing the known Overhead Expenses of the works by the estimated probable future output.

At the time when tenders for wagons were last called for, we estimated the capacity of the Indian Standard Wagon Co., Ld. to be 2,000 wagons per year, and quoted on that basis. But orders were placed for only 1,750 wagons, we therefore expect to lose on the order a sum equal to the difference in Overhead Charges. We pointed out this fact to the Government, but without any result and we enclose copies of our letter No. OM/W. 2727 of 10th December 1925 and the Government reply.

But this remarkable increase in output and decrease in costs mentioned by The Hon'ble Sir Charles Innes is not exclusively due to Governmental assistance. It would be a mistake to suppose that we are supinely relying on a perpetually sheltered market. We on our part have improved and increased the capacity of our plant and every endeavour is being made to attain the goal visualized by the Fiscal Commission (section 118 of their Report) when the industry will be able to "supply the entire demand and to be as efficient as its foreign rivals and make the protective duty become largely, if not altogether inoperative."

We give below a brief account of the progress made by the Indian Standard Wagon Co., Ltd., and Burn & Co., Ld.

The Indian Standard Wagon Co., Ld.

Since the advent of protection the Indian Standard Wagon Co., Ld. have spent about Rs. 1,50,000 on additional plant, jigs, dies and special tools, and intend to spend a further Rs. 1,00,000 approximate in 1926-27 on additional machinery and for the extension of the Machine Shop, Smithy and Tool Room. The Indian Standard Wagon Co., Ld., can now build 2,500 wagons per year, and we intend to lay down special high capacity wagon building machines to enable us to bring an output up to 3,000 wagons per year. The Indian Standard Wagon Co., Ld. have also reduced their share capital and thereby the cost of depreciation to be included in their wagon prices.

Burn & Co., Ld.

During the same period Burn & Co., Ld. spent over Rs. 1,10,000 and have budgeted approximately Rs. 1,30,000 for further, improvements during 1926-27. Burn & Co., Ld. can now build 1,000 wagons per year *plus* 250 underframes. As far as India is concerned Burn & Co., Ld. have an unrivalled experience in wagon building, having built wagons for the past 20 years and by the end of this year that plant will be one of the most modern in the wagon building trade.

Burn & Co., Ld. and the Indian Standard Wagon Co., Ld. together can satisfy therefore two-thirds of the demand for broad gauge wagons in India.

Messrs. Tata are now in a position to supply all kinds of steel utilized in wagon building with the exception of cast steel fittings.

We feel sure that you will admit that the response of the wagon industry in India to the stimulous of protection has been phenomenal; and to withdraw protection now when the industry has reached its adolescent stage would be catastrophic both for the industry and for India.

* * * * * *

In the case of the wagon industry the question of whether protection should be increased or decreased is intimately bound up with the question of what is the most suitable type of protection to employ.

On page 120 of the first Tariff Board Report the Board expressed the opinion that they did not think that the imposition of a protective duty on imported wagons would be a suitable method of developing the industry "at any rate, at 'that' stage." We suggest that the reason underlying that opinion was that the Board were sceptical as to the ability of the Indian Wagon Industry to satisfy in full the Indian demand and in consequence the Board recommended a bounty as a tentative measure.

But "that stage" has now passed and the bounty fund being limited in amount, is now tending to restrict the growth of the industry.

We beg to refer you to the note we forwarded with our letter of the 25th July 1925 (page 249 of the Printed Evidence) in which we expressed our views regarding the three usual types of protection, and in view of the progress made by the industry request you to please consider the question of substituting a protective duty for the bounty scheme.

On page 121 of the first Tariff Board Report and on page 64 of their second Report the Tariff Board recommend that the bounty payable or paid should be made public but in spite of the recommendations of the Tariff Board and of various representations made by the Indian Engineering Association the Government have thought fit to leave us in the dark regarding the amount of bounty paid on each type of wagon to each firm.

The only information that has been disclosed has been the Home Manufacturers f.o.b. prices, and the Indian delivered prices which appeared in the *Indian Trade Journal;* and the statement by Sir Charles Innes in the Assembly that the average bounty paid was Rs. 228 per wagon. The paucity of the information given in the *Indian Trade Journal* makes it almost impossible to make a comparison, and the calculations we have attempted do not give Rs. 228 as the average bounty. If the Government administers the bounty in this secretive manner, how can we judge the progress made towards successful open competition with foreign rivals, and further how can we determine what would be the minimum duty that would adequately protect the industry.

We think that at this stage, at any rate, the Government should publish, or permit the Tariff Board to disclose, those facts and figures that are so essential to the present enquiry. In the meantime we are unable to state what increase in the present duty would afford us adequate protection.

We are, of course, prepared to supply any statistics you require, but we feel that until we are supplied with the facts concerning the bounty any comparative statements we could attempt would be mere guesses.

CARRIAGE UNDERFRAMES.

The manufacture of underframes is collateral to that of wagons and any expansion of the capacity to manufacture wagons means an added capacity to manufacture and build underframes provided the necessary facilities for erection are available as in the case of Burn & Co., Ld. In fact on many

occasions our wagon manufacturing plant would have been idle had it not been for underframe orders. So far the circumstances of the underframe industry have been different from wagon building in two ways.

(1) Orders are not called for at regular and stated times each year and

(2) The orders, compared with those for wagons, are small. The largest order we have so far secured has been one for 137 underframes, and we have just secured one for 5 underframes for the East Indian Railway.

In view of the irregular manner in which tenders for underframes are called for, and orders placed, and in view also of the smallness of the orders usually placed, it is not to be expected that this industry will have made, like wagon building, spectacular progress. But that progress, and substantial progress, has been made is shewn by the following table of outputs:—

	1924.	
September	11	
October	12	
November	15	
December	15	
	1925.	
January	16	
February	12	
March	13	
April	8	(completion).
	1926.	
January	10	
February	25	
March	33	
April	22	
May	44	(anticipated).
June	3	(completion).

	1924-25.	1925-26.
Average per month excluding first and last month	14	31

The 5 underframes we are building for the East Indian Railways are the first of their type to be built in India having special six-wheeled bogies, and are intended for the East Indian Railway deluxe mail train; this seems to indicate that railways are placing increasing confidence in Indian Manufacturers.

With the exception of a slight decline in the price of raw materials, the position of this industry has scarcely changed since we last appeared before the Board in July 1925, when we submitted that the protection of a bounty of Rs. 1,250 per broad gauge underframe and Rs. 700 per metre gauge underframe should be afforded this industry.

On pages 341—345 of the printed Evidence will be found complete details of the costs and weights of the underframes which were placed with us by the East Indian Railway. Since that date we have received only the order for the 5 East Indian Railway underframes, but on April 23rd last we quoted the Great Indian Peninsula Railway for 98 broad gauge underframes, these are of a design different to the East Indian Railway type previously mentioned.

This absence of standardization is one of the factors militating against reduction in costs.

We do not yet know the fate of our tender or how our prices compare with those of our Home and Foreign competitors but we attach details of our quotation in case you are able to obtain from the Great Indian Peninsula Railway that information.

We claim protection, and the continuance of protection on the following grounds:—

(1) It is obvious that we first require protection to the extent of the burden on our raw material.

(2) Secondly, we require protection to encourage the placing with us of larger orders, because the industry cannot be developed if we get only small orders and those at uncertain and irregular intervals.

(3) The industry has the advantage not only of being able to procure all necessary structural and forging material from Tata, it has the added advantage of being an industry collateral to a more highly developed industry, *viz.*, wagon building.

The table annexed shews the estimated cost of some Great Indian Peninsula underframes which was the last order for which we tendered, and also a comparison between the estimated cost of 150 East Indian Railway underframes for which we tendered in 1925 and the price at which the order was placed at Home as per page 385 of the 1925 printed evidence.

We know the Home price of the 150 East Indian Railway underframes but not the Home price of those for the Great Indian Peninsula. We have been obliged therefore to base our claim for protection on a comparison between the Home price of the East Indian Railway underframes and our cost for the same.

" We submit that a specific duty of Rs. 1,600 per underframe should be substituted for the present duty and the bounty of Rs. 600 per underframe.

Present duty	813
Difference between Home and Indian price on East Indian Railway frames	810
.	1,623

Inadequate protection defeats its own object and we respectfully beg to state that we consider inadequate the measure of protection previously granted.*

Wagons and underframes spare parts.

In the foregoing pages we have called attention to the economies of large scale production of wagons and underframes. We would now like to call attention to the fact that wagons and underframes could be still further cheapened if the manufacture of wagon and underframe parts such as screw couplings, etc., were encouraged. The economical manufacture of such parts requires the use of dies and jigs, which makes their production expensive unless large numbers are being manufactured.

Large numbers of these parts are annually required by the railways for replacements. The duty on these fittings is only 10 per cent.; the duty on our raw materials is Rs. 40 per ton; in the circumstances it is not surprising that we are not able to obtain orders.

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* The last 4 paragraphs were substituted by the company as a result of discussion during their oral evidence.

We enclose a list of the principal forgings on a covered goods wagon together with examples, which are typical, of our cost of manufacturing draw bar hooks, brake beams and screw couplings, compared with the price at which those forgings can be imported.

Messrs. Tata can now roll all the classes of steel required, and Tatas special soft steel has been approved by the Railway Board as a substitute for Grade A. Iron.

We are confident that if we had a large and steady market for these forgings we could rapidly bring down their price and this would go a very long way towards reducing our wagon and underframe costs.

In view of these facts we submit that wagon forgings are a fit subject for protection, and claim that the duty thereon should be increased from 10 per cent. to 25 per cent.

FABRICATED STEEL.

The manufacturers of fabricated steel viewed with considerable regret and consternation the policy of the Government in opposing the adoption of the Tariff Board's 1925 recommendations.

The Tariff Board closely investigated the condition of the fabricated steel industry under the instructions of the Government; the Board in due course reported their considered opinion, but for this carefully considered opinion the Government substituted their own, and the reasons advanced by the Government appear on investigation to be ill-considered and superficial. The following were the three objections raised by Sir Charles Innes in the Assembly on the 17th February 1926 (page 1394/6 of the Reports):—

(1) That old established industries should not appeal to the Government when they got into difficulties.

(2) That the Tariff Board's estimates and forecasts for 1925-26 show that the imports are likely to be much less than they were last year.

(3) That the Board would again review the situation this year and that there was no necessity of granting protection then.

In reply to point (1).

Perusal of section 100 of the Fiscal Commission Report will disclose no authority for the supposition that old established businesses should be discriminated against in favour of "infant industries" once the right to protection has been established. In the case of fabricated steel, this right has been established, and the legislature in 1924 endorsed the Tariff Board's recommendations. The Government in 1926 admitted that the industry was getting Rs. 21 a ton less protection than was intended by the legislature, and expected by the manufacturers, but the Government in effect advised the legislature to abandon its previous intention. We confess we are unable to follow the reasoning of the Government of India who seems to confuse the frequent alteration of the Tariff with the maintenance of the tariff.

In reply to point (2).

The figures given in the Sea Borne Trade of India are not sufficiently detailed to enable a comparison to be made by us. But nevertheless, the Tariff Board evidently thought it necessary to restore the protection in spite of their own estimates and forecasts.

In reply to point (3).

Unless the Government are prepared to definitely and consistently maintain the promised degree of protection, the industry cannot thrive for want of security. We fail to see any virtue in procrastination when it has been proved and admitted by the Government that the promised degree of protection is gradually but surely shrinking.

We regret that we are not in a position to quote figures at which contracts have been placed at Home as such information is rarely published. But it

is significant that we are usually able to secure work when the calls for tenders are made only in India, but we are rarely, if ever, able to secure contracts when Home Firms are also given an opportunity to quote, and that in spite of the alleged protective duty.

We have no hesitation in stating that the only orders we have received during the past year have been in cases where no tenders were called for at Home.

We give four examples of orders which have been placed in England recently. In the last case quotations were not even called for in India.

(1) *Madras and Southern Mahratta Railway.*

Wagon shop remodelling at Perambur (date 1-10-25).

(2) *North Western Railway.*

53 Spans of 94′ 6″ (date 13-2-26).

(3) *Assam-Bengal Railway.*

Paint and upholstery shops, Pahartali (date 8-10-25).

(4) *Madras and Southern Mahratta Railway.*

74 Spans from 6 to 60 ft. clear.

84 Flange plates for girders.

Steel material (angles, flats, etc.).

1,161 tons (no tenders called for in India).

The only firm in India that seems to be exempt from the disability in one which is in alliance with a Home Firm of steel manufacturers and Structural Engineers: this firm has been able to underquote us even when Messrs. Tatas have offered Indian manufacturers prices much below the Home price of steel.

The result of the decline in the Home price of steel and of sterling has been that the *ad valorem* duty on fabricated steel has diminished, whilst the burden on our raw material has remained constant, being a specific duty. This fact was realised by the Tariff Board in their 1925 Enquiry, and since that enquiry, we regret to report that the measure of protection has still further receded.

When protection was first granted to the Steel Industry it was accepted by the Tariff Board and the Government of India as axiomatic that the countervailing advantage, either in the form of increased duty or bounty, must be given to the various branches of the Engineering Industry.

As a result of the above an increased duty, calculated not only to cover the increase in the cost of steel but also to provide a substantial amount of protection to the industry, was imposed on fabricated steel, the amount of protection granted being sufficient to balance the greater cost of fabrication in India.

Owing, however, to the decrease in the price of steel and the rise in the rate of exchange the cost of imported steel work has been substantially reduced and a rate of *ad valorem* duty which afforded adequate protection in 1924 is useless to keep the industry alive to-day.

Original Recommendation of Tariff Board.

When the original report on the industry was issued by the Tariff Board their conclusions were based on the following:—

(a) With exchange at 1s. 4d. and steel at Rs. 160 per ton (including wastage) the cost of importing steel work into India was Rs. 250 per ton exclusive of duty or Rs. 275 inclusive of the existing 10 per cent. duty (see page 113 of Tariff Board Report).

(*b*) That the cost of Indian manufactured bridgework (including 10 per cent. duty on steel) was Rs. 293 (see page 114 of Report).

(*c*) That if the duty on steel was raised to Rs. 30. The Indian cost would be Rs. 310 (see page 114). The above considerations lead the Board to recommend that the duty on fabricated steelwork be raised to 25 per cent.

Result Expected from the Enhancement of the duty.

When the Tariff Board recommended that the duty be raised to 25 per cent. they expected it to equalize the imported and Indian costs as per table (A) attached.

The duty expected to be levied was Rs. 62 per ton and this consisted of Rs. 33 compensation for duty in steel and Rs. 29 of substantive protection to the industry.

Actual result of the adoption of an ad valorem *duty.*

Since the Steel Industries Protection Act came into force there has been a steady fall in the price of steel and the exchange has risen by ⅛th from 1*s.* 4*d.* to 1*s.* 6*d.* the result being to still further depress the Home price for fabricated steel.

As a result of the above two factors the amount of duty recovered under the Act has fallen from Rs. 62 to Rs. 46-8 per ton but as the duty on raw steel is specific the Indian manufacturer has received no relief and has thus lost the substantive protection previously afforded to him to the extent of Rs. 16.

Supplementary Tariff Enquiry in 1925.

The fall in the price of steel and the resultant loss of protection was recognised by the Tariff Board in their supplementary report and they recommended that the duty be increased to 32½ per cent.

We attach a schedule showing in detail the successive drops on substantive protection and the necessity of raising the duty to 39 per cent. if an *ad valorem* duty is to be adhered to.

Request for specific duty.

We do not consider it necessary to state in detail our reasons for preferring a specific duty as it has been discussed in detail in Enclosure 1 to our letter of the 23rd June 1925, which has been printed on pages 237—239 of the Evidence before the Tariff Board in their supplementary Enquiry in 1925. We now ask for a specific duty of Rs. 72-8 per ton to be imposed on fabricated steel in order to make the protection afforded to the industry stable and independent of the fluctuations of steel prices and exchange.

POINTS AND CROSSINGS.

Since the Board made their recommendations regarding points and crossings, which appeared on page 116 of their original report, an important advance has been made in this industry.

In July 1923 a Special Committee was appointed by the Conference of Chief Engineers of Indian Railways to standardize the design of points and crossings for Indian Railways, in the manner in which the design of wagons has been standardized.

Prior to this date, designs of points and crossings tended to be peculiar to the particular railway requiring them, and this made the manufacture of points and crossings by mass production an impossibility.

It is not difficult to appreciate that this effort in the direction of standardization of design has opened out possibilities, previously non-existent, of manufacturing points and crossings by mass production and thereby cheapening the cost of production. In short this advance brings the points and crossings industry into that class upon which the Fiscal Commission looked with special favour as being ideal subjects for protection (section 98 of the Fiscal Commission Report).

In view of the protection afforded this industry and in view also of the intention to standardize design, we have extended and remodelled our Points and Crossing Department on the most modern lines and the Department is now capable of turning out 200 sets of points and crossings per month, and we have no hesitation in publicly asserting without fear of contradiction, that the quality of the workmanship is equal to that of any imported points and crossings.

Our output of 200 sets per month represents about 400 tons of steel or about 5,000 tons per annum and the whole of the steel used in the switches and crossings manufactured in our works is of Indian origin.

That this Department has been able to carry on during the last two years is due mainly to three factors:—

(1) Protection;

(2) High Grade Workmanship, and

(3) Quick deliveries due to extending and remodelling this Department.

But the shop has not yet been given the opportunity of working to its full capacity because our price is probably higher than that of the Home manufacturer for we are more frequently called upon to quote for small quantities only, which are required too urgently to call for tenders from Home. For this reason also we are unable to give you examples of Home prices. There are undoubtedly many instances in which tenders have not been called for in India by Indian Railways.

We are strongly of the opinion that this industry would respond as readily as the wagon industry to any real assistance granted by way of protection, and if we had a steady stream of large orders we could undoubtedly, and in a short time, reduce our costs. Given the security of protection we should still further extend this Department, and by the reduction in costs and the increase in output, we should attain the stage the Fiscal Commission had in mind when they wrote (page 55). "In the case of such an industry the burden on the consumer determines automatically."

The statements we have made regarding the decline in the margin of protection originally granted, apply to points and crossings equally with other fabricated steel, and need not be repeated here.

We do not ask so much that the protection originally afforded should be increased; we ask rather than the original measure of protection granted, should be restored to its original degree.

Enclosure I.

COPY.

GOVERNMENT OF INDIA.

RAILWAY DEPARTMENT.

(RAILWAY BOARD.)

No. 35-S. I.

Dated Delhi, the 22nd of December 1925.

To

MESSRS. BURN AND COMPANY,
Managing Agents,
The Indian Standard Wagon Co., Ld.,
Howrah.

Tender for Wagons.

DEAR SIRS,

With reference to paragraph 3 of your letter No. O. M./W. 2727, dated the 10th December 1925, I am directed to state that the wagons are required as follows:—

East Indian Railway	845	C 2 type wagons.
North Western Railway	112	Do.
Great Indian Peninsula Railway . .	429	Do.
TOTAL .	1,386	

All the 324 C-3 type wagons are required for the North Western Railway.

2. Regarding paragraph 4 of your letter in which you express your disappointment that the Railway Board have not placed with you an order for the full number of wagons for which you tendered, I am to refer you to paragraph 3-G of the call for tenders in which it is stated that—

> "The Railway Board reserve to themselves the power of rejecting any tender without assigning a reason, and do not bind themselves to accept the lowest tender, the whole of a tender or any tender."

3. I am to add that the Railway Board regret they cannot agree to any of the three requests contained in paragraph 5 of your letter.

Yours faithfully,

(Sd.)

for *Secretary, Railway Board.*

Enclosure II.

COPY.

THE INDIAN STANDARD WAGON CO., LD.

HOWRAH OFFICE,
C/o Messrs. Burn & Co., Ld.,
Howrah.

No. O. M./W. 2727.

Dated 10th December 1925.

The Secretary,
Railway Board,
Delhi.

DEAR SIR,

We beg to acknowledge with thanks receipt of your letter No. 35-S.-1 of the 5th instant informing us that the following wagons have been placed with us:—

I. R. C. A. C-2 type 1,386 wagons at Rs. 3,110 per wagon.
I. R. C. A. C-3 type 324 wagons at Rs. 3,250 per wagon.

A further order of 40 I. R. C. A. Standard C-2 type wagons at the same rate as above will be placed with us subject to the concurrence of the Home Board of the South Indian Railway.

for delivery f.o.r. Works.

We note that the Board will advise us in due course of the railways for which the wagons now ordered are intended and we shall be glad to have this information as early as possible so as to enable us to put in hand the correct fittings.

Whilst expressing our best thanks for this order for 1,750 wagons we must state that we are very disappointed that the Railway Board have not been able to place with us the full quantity of wagons for which we tendered. We expressly stated that we had cut our prices as low as possible and that our tender was based on receiving an order for 2,000 wagons. If we are only to receive contracts for a total 1,750 wagons for the whole year 1926-27 the Company will be faced with a loss of Rs. 133 per wagon due to all overhead charges having to be carried on the reduced number of wagons ordered.

We beg, therefore, to enquire if the Railway Board will assist us—

(1) By placing with us an order for a further 300 C-2 or C-3 wagons or
(2) Grant us their assurance that additional orders will be placed not later than August next year to enable us to keep the Works in full operation, or
(3) If they feel that they are not in a position to place further orders as suggested, would they please consider the revision of the prices of the orders placed, so as to include the Rs. 133 difference in price due to the smaller number being ordered.

Trusting the matter will receive your favourable consideration.

Yours faithfully,

Enclosure III.

FORGINGS FOR A-2 TYPE WAGONS.

Name of Component.	No. per set.	Material used in manufacture.
Scroll Irons	8	Special Soft Steel (Grade
Spring Shackles	16	A) B. Steel.
Drawbar Hooks	2	"D" Steel (4° Sq. Billet).
Drawbar Face Plates	2	B. Steel.
Pull Rod	1	B. Steel.
Flap Door, Side Hinge, R. & L.	4	Special Soft Steel.
Flap Door, Centre, R. & L.	2	Special Soft Steel.
Swing Door, R. & L.	8	Special Soft Steel.
Hand Brake Clutches	1	B. Steel.
Brake Shaft, Short Levers	1	Special Soft Steel.
Brake Shaft, Long Levers	1	Special Soft Steel.
Cylinder Carriers	2	B. Steel.
Short Pull Rods	2	B. Steel.
Hand Brake Levers	1	Special Soft Steel.
Vertical Lever Brackets	1	B. Steel.
Swing door frames, A.	2	B. Steel.
Swing door frames, B	2	B. Steel.
Flap Door Frames	2	B. Steel.
Chainless Cotter for Swing Door	4	B. Steel.
Brake Block Hanger	4	Special Soft Steel.
Drawbar Spindle	4	D. Steel.
Swing Door Bolt	2	B. Steel.
Axleguard	4	Special Soft Steel.
Brake Rack Guard	1	B. Steel.
Brake Shaft	1	B. Steel.
Brake Beams	2	B. Steel.
Brake Shaft Hanger	2	M. S. Plate.
Vertical Lever Bracket, B	1	Special Soft Steel.
Vertical Lever	4	B. Steel.
Vertical Lever Hanger	2	B. Steel.
Brake Shaft Collars	1	B. Steel.
Connecting Rod	1	B. Steel.
End Inter Stanchion	4	M. S. Bulb Angle.
End Centre Stanchion	2	M. S. Bulb Angle.
Corner Stanchion	4	M. S. Angle.
Double Knee for Trimmer	2	M. S. Plate.
Diagonal	4	Mild Steel.
Body Bracket	12	M. S. Plate.
Buffer Spindle and Head	4	B. Steel.
Screw Coupling Shackle (Long)	2	D. Steel.
Screw Coupling Shackle (Hook)	2	D. Steel.
Screw Coupling Shackle (Short)	2	D. Steel.
Screw Coupling, Trunnion Nut	4	D. Steel.
Suspender Hook	2	B. Steel.

Enclosure IV.

WAGON FITTINGS.

COMPARATIVE COSTS FOR A-2 TYPE.

Drawbar hooks.

Burn & Co., Ld.

Material.	Quantity.	Rate.	Cost.
		Rs. A. P.	Rs. A. P.
D. Steel	Cwt. 1 2 6	9 1 0	14 1 3
5 per cent. Wastage	...	...	0 11 6
Total Material	...	..	14 12 9
Labour	...	...	7 4 6
Charges	...	...	18 5 9
Total cost	...	...	40 7 0

Imported (British) 1925.

	Rs. A. P.
C.i.f. price £2-9-6 at 1*s.* 6*d.* per rupee	33 0 0
Landing	0 4 6
Landed cost without duty	33 4 6

Difference = Rs. 7-2-6 or 21 per cent.

WAGON FITTINGS.

COMPARATIVE COSTS FOR A-2 TYPE.

One vehicle set of 2 brake beams complete.

Burn & Co., Ld.

Material.	Quantity.	Rate.	Cost.
		Rs. A. P.	Rs. A. P.
Special soft steel	Cwt. 2 1 0	8 4 0	18 9 0
5 per cent. Wastage	...	..	0 14 10
4 Nuts 1½" Whitworth	...	...	0 8 0
4 Split Pins $\frac{5}{16}$" diameter	...	...	0 3 0
4 Grover washer	...	...	0 8 0
Total Material	...	....	20 10 10
Labour	...	...	7 4 0
Charges	...	...	16 7 7
Total cost	...	...	44 6 5

Imported (British).

	Rs. A. P.
C.i.f. price £2-12-3 at 1s. 6d. per rupee . .	34 13 4
Landing	0 7 9
Landed cost without duty .	35 5 1

Difference = Rs. 9-1-4 or 26 per cent. of imported cost.

WAGON FITTINGS.

COMPARATIVE COSTS FOR A-2 TYPE.

One vehicle set of screw couplings.

Burn & Co., Ld.

Material.	Quantity.	Rate.	Cost.
		Rs. A. P.	Rs. A. P.
D. Steel	Cwt. 1 3 13	9 1 0	16 14 8
Mild Steel	0 0 9	7 4 0	0 9 0
Cast Iron	0 0 14	6 8 0	0 13 0
5 per cent. Wastage . . .	...	...	0 14 8
Rivets	...	...	0 2 0
Total Material .	...	...	19 5 4
Labour	...	...	12 3 0
Charges	...	...	23 3 8
Total cost .	...	...	54 12 0

Imported (British) 1926.

	Rs. A. P.
C.i.f. price £3-5-0 at 1s. 6d. per rupee . . .	43 5 4
Landing	0 6 8
Landed cost without duty .	43 12 0

Difference = Rs. 11 or 25 per cent. of imported cost.

Enclosure V.

G. I. P. UNDERFRAMES.

Summary.

	Rs.	A.	P.
Materials as per list No. 1	211	5	2
Do. No. 2	3,075	6	6
Do. No. 3	2,015	13	7
Do. No. 4	963	6	0
	6,265	15	3
Labour	1,585	0	0
Charges	2,233	0	0
Profit	200	0	0
TOTAL .	10,283	15	3

You will notice that the profit only represents 2 per cent., as we were anxious to obtain this order to enable our shops to be kept in operation until March 1927, but we consider this margin of profit unremunerative, and that we should obtain a minimum of 5 per cent.

G. I. P. UNDERFRAMES.

Quotation submitted on 23rd April 1926.

List No. 1.—Imported materials subject to Protective Duties.

Material.			Rate per cwt.			Total.		
			Rs.	A.	P.	Rs.	A.	P.
M. S. Channel 8″ × 3″ × ⅜″ .	Cwts.	6 0 3	7	0	0	42	3	0
„ Angle 7″ × 3½″ × ⅜″ . .	„	1 1 22	7	0	0	10	2	0
„ „ 4½″ × 3½″ × ⅜″ .	„	4 0 22	7	0	0	29	6	0
„ „ 3½″ × 3½″ × ⅜″ .	„	1 0 6	7	0	0	7	6	0
„ Channel 9″ × 3½″ . .	„	5 2 11	7	0	0	39	3	0
„ Tees 4″ × 3″ × ⅜″ . .	„	2 0 2	7	9	0	15	4	2
„ Angles 8″ × 6″ × ½″ .	„	1 0 20	7	0	0	8	4	0
„ „ 7″ × 3½″ × ½″ .	„	8 0 0	7	0	0	56	0	0
„ „ 3½″ × 2½″ × ½″ .	„	0 2 1	7	0	0	3	9	0
Total .	...		...			211	5	2

G. I. P. UNDERFRAMES.

Quotation submitted on 23rd April 1926.

List No. 2.—Imported material not subject to Protective Duties.

Material.		Rate per cwt.	Total.
		Rs. A. P.	Rs. A. P.
Bolts with nuts . . .	Cwt. 2 3 0	18 1 0	49 10 9
Nuts	„ 0 2 27	...	23 5 0
Rivets	„ 9 1 0	14 0 0	128 4 0
4 Buffers comp. with Rubber Springs	Each	99 14 9	339 11 0
Washers	„	....	6 3 0
Split Pins	„	...	2 10 0
8 Axleboxes	„	47 12 0	382 0 3
16 Grover Washers . . .	„	0 8 0	8 0 0
Steel Castings . . .	Cwt. 19 1 23	...	353 3 11
2 Screw Couplings . . .	Each.	29 0 0	58 0 9
6 Turnbuckles . . .	„	10 4 0	61 8 0
8 Laminated Bearing Springs .	„	50 6 11	403 7 6
Bogie Check Chains . .	„	23 1 6	92 6 0
Miscellaneous items . . .	„	...	10 0 0
4 Draw Springs . . .	„	7 11 2	30 12 10
4 Side Check Springs . .	„	1 9 5	6 5 8
8 Bolster Check Springs . .	„	8 1 4	64 11 0
4 Do. Do. . .	„	7 8 1	30 3 7
16 I. R. Anx. Bearing Spring with fittings . . .	„	64 1 0	1,025 6 6
Total .	...	...	3,975 6 6

G. I. P. UNDERFRAMES.

Quotation submitted on 23rd April 1926.

List No. 3.—Materials purchased in India, which if imported would be subject to a Protective Duty.

Material.			Rate per cwt.	Total.
			Rs. A. P.	Rs. A. P.
Channels	Cwt.	83 3 20	6 8 0	545 8 7
Angles	,,	8 0 20	6 12 0	55 3 3
Do.	,,	12 1 14	6 8 0	80 4 0
Plates and Sheets	,,	110 2 26	6 12 0	747 5 1
M. S. Plates	,,	9 2 9	6 12 0	63 8 8
Bars	,,	65 1 27½	8 0 0	524 0 0
Total		...	...	2,015 13 7

G. I. P. UNDERFRAMES.

Quotation submitted on 23rd April 1926.

List No. 4.—Materials purchased in India, which if imported would not be subject to a Protective Duty.

Material.	Rate per cwt.	Total.
		Rs. A. P.
Vacuum Brakework	...	725 0 0
Paint	...	183 0 0
Axle Oil	...	26 4 0
Cotton Waste	...	3 2 0
Cast Iron	...	26 0 0
Total	...	963 6 0

Enclosure VI.

FABRICATED STEEL.

Result expected by the Tariff Board from the imposition of a 25 per cent. *ad valorem* duty.

Indian Fabricated Steel (1 ton).

	Rs.
Steel	145
Wastage 10 per cent.	15
Duty	33
Fabrication	117
TOTAL	310

English Fabricated Steel (1 ton).

	Rs.
Steel	145
Wastage 10 per cent.	15
Fabrication	90
TOTAL	250
Duty 25 per cent.	62½
TOTAL	312½

Enclosure VII.

Comparative costs of English and Indian Structural Steel Work (per ton of Fabricated Steel).

English Fabricated Steel.				Indian Fabricated Steel.			
Details.	February 1924.	September 1925.	April 1926.	Details.	February 1924.	September 1925.	April 1926.
Rate of Exchange	1s. 4d.	1s. 6d.	1s. 6d.	Rate of Exchange	1s. 4d.	1s. 6d.	1s. 6d.
Landed cost of 1 ton of Steel without duty.	£9-13-4= Rs. 145	£9-0-0= Rs. 120	£7-14-6= Rs. 103	Landed cost of 1 ton of Steel without duty.	£9-13-4= Rs. 145	£9-0-0= Rs. 120	£7-14-6= Rs. 103
Cost of 1 ton of Fabricated Steel.				Cost of 1 ton of Fabricated Steel.			
Steel	145	120	103	Steel	145	120	103
Wastage 10 per cent.	15	12	10·3	Wastage 10 per cent.	15	12	10·3
Fabrication	90	80	72·5	Duty on Steel	33	33	33·0
Total	250	212	185·8	Fabrication	117	117	112·0
Duty 25 per cent.	62½	53	46·5				
Landed Cost	312½	265	232·3	Total Cost	310	282	258·3
Difference between British and Indian costs before adding duty	80	70	72·5				
Ad valorem duty required	25%	33%	39				
Duty Paid	62½	53	46·5				
1926 Position.				Duty paid	33	33	33
Difference between Indian and Home price.	72·5	...	...	Differenee being Substantive Protection	29·5	20	13·5
Deduct offsetting duty	33·0	...	...				
Protection now required	39·5	...	...	Loss of Protection since 1924	...	9·5	16·0

(2) *Letter from Messrs. Burn and Company, Limited, dated 31st May 1926, giving replies to questionnaire regarding wagons and locomotives.*

We beg to send herewith six copies of our replies to the questionnaire sent with your letter No. 250 of 15th May 1926.

Replies to Questionnaire for Wagon/Locomotive builders.

1. The following is a typical list of the Steel Castings required in Carriage and Wagon building:—

Axle-boxes, Buffer Cases and Plungers, Solebar stiffening brackets, Side Truss-beam Brackets, End Body Brackets Inner and Outer, Top and Bottom Centre Pivots, Wearing Brackets for Swing Links, Side Truss-beam Brackets Right and Left, Brake Block Hanger Brackets, Top Spring Castings, Brake Block Hanger Brackets Right and Left, Friction Blocks Bottom Outside, Bottom Spring Castings, Swing Beam Saddles.

We see no reason why all the above cannot be manufactured in India from scrap.

2. The wagon castings have been standardized and are common to all types of wagons but not those for Carriage Underframes. But we understand that the standardization of carriage underframes is under consideration.

3. We have no experience of steel making but do not see any inherent difficulty in the manufacture of Steel Castings in India. We understand, however, that certain kinds of sand have to be imported.

The manufacture of spring steel is handicapped by the fact that only basic pig is obtainable in India, the small amount of acid steel produced locally being made from imported pig iron by Ishapore, the Bombay, Baroda and Central India Railway at Ajmere, and the East Indian Railway at Jamalpur.

In the British Standard Specifications Report No. 24 of 1921 the following specifications allow the use of only Acid Steel:—

Nos. 6, 6b, 7, 7a;

and the following allow the use of basic Open Hearth Steel also:—

Nos. 6a, 6c.

Of these specifications—

Nos. 6, 6a, 6b and 6c refer to Laminated Springs and Steel; therefore
Nos. 7 and 7a refer to Volute and Helical Springs.

It will thus be seen that the use of basic open hearth steel is allowed in the alternative specifications for Laminated Springs but not at all for Volute and Helical Springs.

We understand that the Railway Board do not at present accept spring steel made by the basic process, but that Messrs. Tata have approached the Railway Board on the subject.

4. Wagons: Approximately 7½ cwts. average.

Carriage Underframes: Approximately 1¼ tons average.

5. We attach herewith the statement giving such information as we can supply.

Year.	Springs.		Spring Steel.		Solebar Stiff Brackets.		Axle-Boxes.		Other Castings.		Buffer Cases.	
	Imported.	Local.	Imported.	Local.	Imported.	Local.	Imported.	Local.	Imported.	Local.	Imported.	Local.
	Tons.	Tons	Tons.	Tons.	Tons.	Tons.	Tons.	Tons	Tons.	Tons.	Tons.	Tons.
1922-23 . . .	55	...	3	...	..	.	3	..	8	..	3	...
1923 24 . .	78	...	4	...		...	14	19	30	53	9	..
1924-25 . . .	266	104	345	...	23	16	161	..	21	99	169	...
1925-26 . . .	242	25	646	...	59	2	422	...	139	...	334	...

6. We attach herewith the statement (Enclosures I to V) giving such information as we can supply.

7. (*a*) We did at one time investigate the question of installing a steel plant, but came to the conclusion that it was more economical to import the castings.

(*b*) We manufacture iron castings and the percentage of castings rejected is about 2 per cent. In practice the number of rejections naturally depends on the type of castings being made; we have merely given the average.

8. (*a*) Generally speaking Indian Castings are not so good as those from Great Britain or the Continent but we have had excellent castings from the Bombay, Baroda and Central India Steel Foundry at Ajmere who made those castings not by the Electric but by the Tropoenas Process.

(*b*) The only Indian Spring Steel we have had experience of is that from the Ishapore Gun and Shell Factory. The Steel was satisfactory, but the rolling and deliveries were bad.

9. We enclose copies of correspondence (Enclosures VI to XIII) which passed between ourselves and Messrs. Hukumchand. The correspondence gives the history and fate of two orders placed in 1924, and indicates why they are not usually invited to quote. Messrs. Hukumchand's representative is frequently at our Works, and knows when an order for rolling stock is placed with us, but Messrs. Hukumchand do not even ask to be given the opportunity to quote. Their prices are also unfavourable; in the Spring of 1925 we obtained an emergency supply of over 2,000 solebar stiffening brackets from them; we were importing these brackets at Rs. 2-9-6 each landed, but Hukumchand's price was Rs. 3-12.

Enclosure I.

Steel Castings.

Year 1923.

Item. Axle-boxes.

Country of Origin—England. Condition—Rough castings.
Weight—each, 3 qrs., per set, 3 cwts.
F.o.b. cost per cwt.—36 shillings.

	£	s.	d.
F.o.b. cost per each . .	1	7	0
Freight	0	1	9½
Insurance	0	0	1
TOTAL .	1	8	10½ each = £5-15-6 per set of 4.

Item. Buffer Cases.

Country of Origin—England. Condition—Rough castings.
Weight—each, 2 qrs., per set 2 cwts. 3 qrs. 8 lbs.
F.o.b. cost per cwt.—28 shillings (Approx.).

	£	s.	d.
F.o.b. cost per each	0	19	6
Freight	0	1	8
Insurance	0	0	1
TOTAL .	1	1	3 each.

NOTE.—Landing Charge Rs. 5-8 per ton.
London Office Commission 3 per cent.
Duty 10 per cent.

Enclosure II.

Steel Castings.

Year 1924.

Item. Axle-boxes.

Country of Origin—England. Condition—Axle-boxes, machined complete with Pressed Steel, Cover Plates, Cast Iron Slides with Finger Pull Dust Shields and Dust Shields, Cover Plates.

Weight—each, 3 qrs. 2 lbs.; per set, 3 cwts. 0 qr. 8 lbs.

F.o.b. cost per cwt.—49 shilings.

	£	s.	d.	
F.o.b. cost per set	7	11	0	
Freight	0	10	0	
Insurance	0	0	6	
TOTAL	8	1	6	per set.

Item. Axle-boxes.

Country of Origin—England. Condition—complete as above with bearings, special.

Weight—each, 3 qrs. 2 lbs.; per set, 6 cwts. 0 qr. 16 lbs. (Castings only).

F.o.b. cost per cwt.—Unable to say as bearings included.

	£	s.	d.	
F.o.b. cost per set	25	12	0	per set of 8.
Freight	1	1	0	
Insurance	0	1	9	
TOTAL	26	14	9	

Item. Buffer Cases.

Country of Origin—England. Condition—Castings, machined.

Weight—each, 2 qrs. 12 lbs.; per set, 2 cwts. 1 qr. 20 lbs.

F.o.b. cost per cwt.—46 shillings (Approx.).

	£	s.	d.	
F.o.b. cost per each	1	8	0	
Freight	0	1	4	
Insurance	0	0	1	
TOTAL	1	9	5	each.

NOTE.—Landing Charge Rs. 5-8 per ton.
London Office Commission 3 per cent.
Duty 10 per cent.

Item. Buffer Plungers.

Country of Origin—England. Condition—Castings, machined.
Weight—each, 2 qrs. 9 lbs.; per set, 2 cwts. 1 qr. 8 lbs.
F.o.b. cost per cwt.—42 shillings (Approx.).

	£	s.	d.
F.o.b. cost per each	1	4	6
Freight	0	1	3
Insurance	0	0	1
TOTAL	1	5	10 each.

NOTE.—Landing Charge Rs. 5-8 per ton.
London Office Commission 3 per cent.
Duty 10 per cent.

Enclosure III.

Steel Castings.

Year 1925.

Item. Axle-boxes.

Country of Origin—England. Condition—Castings, Axle-boxes, machined complete with Axle-boxes, Pressed Steel Cover Plates, Cast Iron Slides with finger pulls, Dust Shields and Dust Shield Cover Plates but without bearings.
Weight—each, 3 qrs. 2 lbs.; per set, 3 cwts. 0 qr. 8 lbs. (Axle-box only).
F.o.b. cost per cwt.—49 shillings.

	£	s.	d.	
F.o.b. cost per set of 4	7	11	0	
Freight	0	10	0	
Insurance	0	0	6	
TOTAL	8	1	6	per set of 4.

Item. Solebar Stiffening Brackets.

Country of Origin—England. Condition—Castings, undrilled.
Weight—each, 10½ lbs.; per set of 4, 1 qr. 14 lbs.
F.o.b. cost per cwt.—33 shillings (Approx.).

	£	s.	d.	
F.o.b. cost per set	0	12	6	
Freight	0	0	11	
Insurance	0	0	1	
TOTAL	0	13	6	per set of 4.

Item. Buffer Cases and Plungers.

Country of Origin—England. Condition—Castings, machined.
Weight—each, 1 cwt. 0 qr. 7 lbs.; per set, 4 cwt. 1 qr.
F.o.b. cost per cwt.—31 shillings (Approx.).

	£	s.	d.
F.o.b. cost per each . .	1	13	3
Freight	0	2	7
Insurance	0	0	2
TOTAL .	1	16	0 each, *i.e.*, £7-4-0 per set of 4.

NOTE.—Landing Charge Rs. 5-8 per ton.
London Office Commission 3 per cent.
Duty 10 per cent.

Enclosure IV.

Steel Castings.

Year 1926.

Item. Axle-boxes.

Country of Origin—Belgium. Condition—Axle-boxes machined complete with Face Plates, Dust Shield Cover Plates, Cast Iron Slides with finger pulls, Dust Shields, but without bearings.
Weight—each, 3 qrs. 2 lbs.; per set, 3 cwt. 0 qr. 8 lbs. of 4 (Castings only).
F.o.b. cost per cwt.—33 shillings (Approx.).

	£	s.	d.
F.o.b. cost per set	5	1	0
Freight	0	11	0
Insurance	0	0	6
TOTAL .	5	12	6

Item. Solebar Stiffening Brackets.

Country of Origin—Belgium. Condition—Castings, undrilled.
Weight—each, 10½ lbs.; per set, 1 qr. 14 lbs.
F.o.b. cost per cwt.—20 shillings (nearly).

	£	s.	d.
F.o.b. cost per each . .	0	1	7½
Freight	0	0	2
Insurance . . .	0	0	0½
TOTAL .	0	1	10 each or £0-7-4 per set of 4.

Item. Buffers.

Country of Origin—England. Condition—Complete with Steel Springs.

Weight—each, 2 cwt. 1 qr. 23½ lbs. (including Springs). 1 cwt. 2 qrs. 25 lbs. (without Springs).

Cost delivered our Yard—Rs. 58-12 per Buffer.

NOTE.—Obtained through a Calcutta Firm, f.o.b. price, therefore, not available.

Enclosure V.

Spring Steel.

Year 1923.

Sizes 4″×½″ and 4″×⅜″

	Per ton. £	s.	d.
F.o.b. cost	14	7	6
Freight	1	1	4½
Insurance	0	1	2½
	15	10	1

Year 1924.

Size 4″×½″.

	Per ton. £	s.	d.
F.o.b. cost	14	10	0
Freight	1	1	4½
Insurance	0	1	1½
	15	12	6

Year 1925.

Sizes 4″×½″ and 4″×⅜″

	Per ton. £	s.	d.
F.o.b. cost	14	0	0
Freight	1	1	4½
Insurance	0	0	10½
	15	2	3

Sizes 4″×½″ and 3″×½″ (January).

	Per ton. £	s.	d.
F.o.b. cost	14	5	10
Freight	1	1	4½
Insurance	0	1	0½
	15	8	3

Sizes 4″ × ¾″ and 4″ × ½″ (November).

	Per ton. £ s. d.
F.o.b. cost	13 10 0
Freight	1 1 4½
Insurance	0 0 10½
	14 12 3

NOTE.—Landing Charges Rs. 5-8 per ton.
London Office Commission 3 per cent.
Duty 10 per cent.

Year 1926.

Sizes 4″ × ½″ and 4″ × ⅜″

	Per ton. £ s. d.
F.o.b. cost	10 10 0
Less 2½ per cent.	0 5 3 (Continental).
	10 4 9
Freight	1 1 4½
Insurance	0 0 7½
	11 6 9

Size 3″ × ½″.

	Per ton. £ s. d.
F.o.b. cost	10 11 2 (Continental).
Freight	0 16 7½
Insurance	0 0 8½
	11 8 6

NOTE.—Landing Charge Rs. 5-8 per ton.
London Office Commission 3 per cent.
Duty 10 per cent.

Enclosure v 4.

(Copy.)

No. CW. 6066-H.

Dated 12th February 1924.

The Hukumchand Electric Steel Works, Ld.,
30, Clive Street,
Calcutta.

Dear Sirs,

Order No. 8870 of 1923-24.

53 B. G. Carriage Underframe Sets for E. B. R.

We have pleasure in placing with you our order for 53 sets of B. G. Carriage Underframes and Bogie Steel Castings at Rs. 27-4-8 (Rupees Twenty-seven, annas four and pies eight only) per cwt. delivered our Yard, Howrah. Each set consists of the following:—

1. 4 Top Bolster Spring Bearings, Sheet No. 91A.
2. 4 Bottom Bolster Spring Bearings, Sheet No. 92.
3. 8 Bolster Side Bearing Blocks, Sheet No. 93.
4. 4 Bottom Side Bearers, Sheet No. 128A.
5. 4 Top Side Bearers, Sheet No. 130A.
6. 4 Queenposts (Solebar), 2 R.H. and 2 L.H., Sheet No. 344.
7. 4 Queenposts (Longitude), 2 R.H. and 2 L.H., Sheet No. 345.
8. 16 Auxiliary Bearings Spring Boxes, Sheet No. 129.

With reference to Items 6, 7 and 8, the manufacture of these items should not be commenced until further instructions are received from us. We understand you can guarantee delivery of 16 complete sets of Castings in from 5 to 6 weeks from receipt of this order.

We shall be pleased if your representative will call to see the Manager of our C. and W. Department when our manufacturing programme can be discussed and arrangements made with you and confirmed regarding our definite monthly requirements.

We enclose herewith one ferro of each of the drawings above mentioned.

Yours faithfully,

(Sd.)

Managing Agents.

Accompts. 8 ferros.

Enclosure VII.

(Copy.)

THE PIONEER ELECTRIC STEEL COMPANY.

Calcutta, 15th February 1924.

MESSRS. BURN & CO., LD.,
Howrah.

DEAR SIRS,

Order No. 8870 of 1923-24.

53 B. G. Underframe Sets—E. B. Ry.

We have to acknowledge, with thanks, receipt of your valued order for steel castings as detailed in your letter of the 12th instant at Rs. 27-4-8 per cwt. delivered your yard, Howrah.

We note you do not require us to commence work on Items 6, 7 and 8 until we receive further instructions from you.

We undertake to supply 16 complete sets of castings in 5 to 6 weeks from date of receipt of this order and thereafter at the rate of 15 complete sets per month until completion.

Assuring you of our most careful attention to your requirements.

Yours faithfully,
For Hukumchand Electric Steel Works,
(Sd.) F. G. WILLIAMS,
Manager.

Enclosure VIII.

(Copy.)

No. CW. 7488-H.

Dated 10th April 1924.

THE HUKUMCHAND ELECTRIC STEEL WORKS, LD.,
30, Clive Street,
Calcutta.

DEAR SIRS,

Order No. 8871 of 1923-24.

53 B. G. Carriage Underframe Sets for O. and R. Ry.

We have pleasure in placing with you our order for 53 sets of B. G. Carriage Underframes and Bogie Steel Castings at Rs. 27-4-8 (Rupees Twenty-seven, annas four and pies eight only) per cwt. delivered our Yard, Howrah. Each set consists of the following:

1. 4 Top Bolster Spring Bearings, Sheet No. 91A.
2. 4 Bottom Bolster Spring Bearings, Sheet No. 92.

3. 8 Bolster Side Bearing Blocks, Sheet No. 93.
4. 4 Bottom Side Bearers, Sheet No. 128A.
5. 4 Top Side Bearers, Sheet No. 130A.
6. 4 Queenposts (Solebar), 2 R.H. and 2 L.H., Sheet No. 344.
7. 4 Queenposts (Longitude), 2 R.H. and 2 L.H., Sheet No. 345.

Referring to Items 6 and 7, the manufacture of these fittings should not be commenced until further instructions are received from us.

The Sheet Numbers mentioned above are already with you having been sent with our order No. 8870 of 12th February 1924.

We have approached the Controller of Inspection, Calcutta Circle, and he has agreed to inspect these fittings at your Works prior to despatch. We shall be pleased, therefore, if you will arrange not to despatch any castings to our Works until they have been passed by the Inspection Department.

Yours faithfully,

(Sd.)

Managing Agents.

Enclosure IX.

(Copy.)

No. CW. 316-H.

Dated 15th May 1924.

THE HUKUMCHAND ELECTRIC STEEL WORKS, LD.,

30, Clive Street,

Calcutta.

DEAR SIRS,

O/8870 CW. 1923-24.

53 B. G. Underframes for the E. B. Ry.

We are arranging to return you 15 cast steel Bolsters which will not machine up to the dimensions circled in red on our sheet drawing No. 91A enclosed herewith.

Please note this is the first selection made from the castings that have been supplied up to date.

Yours faithfully,

(Sd.)

Managing Agents.

Enclosure I.

Copy sent to D. O. and C. W. S. to arrange immediate despatch to the Hukumchand Electric Works.

Enclosure X.

(Copy.)

No. CW. 3699-H.

Dated 22nd October 1924.

THE HUKUMCHAND ELECTRIC STEEL WORKS, LD.,
30, Clive Street,
Calcutta.

DEAR SIRS,

Steel Castings for Carriage Underframes.

We shall be much obliged if you will arrange to expedite delivery of another 20 sets of Queenposts for the above Underframes as the work will be seriously held up for the want of this material.

We shall require 15 sets of large Queenposts right and left hand and also 12 sets of short Queenposts right hand only for the November output of Underframes.

Yours faithfully,

(Sd.)

Managing Agents.

Enclosure XI.

(Copy.)

No. S. P. 4172-H.

Dated 14th November 1924.

THE HUKUMCHAND ELECTRIC STEEL WORKS, LD.,
30, Clive Street,
Calcutta.

DEAR SIRS,

Orders Nos. 8870 and 8871.

Steel Castings for Carriage Underframes.

We have to address you regarding the exceedingly serious position created by your failure to deliver the steel castings required for the carriage underframes we are making for the E. B. and O. and R. Railways. You gave us an undertaking to deliver 16 complete sets of castings within 5 to 6 weeks from date of receipt of order and to continue deliveries at the rate of 15 underframe sets thereafter. Had you adhered to this guarantee Items 1, 2, 3, 4 and 5 of our orders would have been completed by the end of September and 65 sets of Items 6 and 7 would have been delivered by this date.

We have underframes in our shops which we cannot place on their wheels for want of Queenposts, others are entirely finished but cannot be despatched for want of side bearers and the whole output of underframes is now entirely dependent upon your deliveries.

As this cannot be tolerated indefinitely we have to advise you we have today cabled to England and have placed orders for 30 complete sets of castings there and we herewith cancel 30 complete sets of castings from you, that is, in place of the two orders totalling 106 sets; and we now ask you to supply 76 sets only. In the meanwhile we must insist upon better deliveries and we must advise you that should our monthly despatches be held up we shall recover the amount of our losses from your bills.

Yours faithfully,

(Sd.)

Managing Agents.

Enclosure XII.

(Copy.)

THE HUKUMCHAND ELECTRIC STEEL WORKS.

Calcutta, 20th November 1924.

MESSRS. BURN & Co., LD.,

Howrah.

DEAR SIRS,

Your Orders Nos. 8870 and 8871. Steel Castings for Bogie Underframes.

We have to acknowledge receipt of your letter of the 14th instant and note with great regret that you propose to cancel 30 complete sets of the above castings. Your decision to do so involves us in heavy financial loss, as practically all the castings required to complete the order have been made and we are now working a double shift on them in order to complete the whole order by December 31st, 1924.

We attach a statement showing the numbers actually cast, the numbers delivered and the balance due on each item. From this you will see that with the exception of the Queenposts and Top Side Bearers, all the castings have been made. They have also passed through the annealing and cleaning operations and now only require the heads to be removed and some slight further fettling operation to complete them ready for delivery.

It is only a very short time ago that we received from you extra patterns for Queenposts and Top Side Bearers to enable us to speed up deliveries of these components. These extra patterns together with the double shift we are now working will enable us to complete these components also by December 31st, 1924. We ask for no consideration from you regarding any components which have not actually been made. We do, however, crave your indulgence in the matter of the large stock of castings made to your order and lying at our Works and rapidly approaching completion.

We are confident we can complete the whole order before any castings can be obtained from England, and this being the case, there appears to be nothing gained in the matter of deliveries by ordering now from Home. We, therefore, request you to be so good as to reconsider your decision in the matter and permit us to continue to deliver our castings as they are completed.

Thanking you and assuring you of our best services,

We are, Dear Sirs,

Yours faithfully,

For Hukumchand Electric Steel Works,

(Sd.)

Manager.

Enclosure XIII.

(Copy.)

No. S. P. 4305-H.

21st November 1924.

THE HUKUMCHAND ELECTRIC STEEL WORKS, LD.,
30, Clive Street,
Calcutta.

DEAR SIRS,

Our Orders 8870 and 8871.

We are in receipt of your letter, dated the 20th, regarding our decision to order 30 sets of steel castings from England and cancel 30 of the overdue sets ordered from you.

As you are aware you guaranteed to deliver 15 sets per month but you have only averaged 5 sets. For months past we have been seriously delayed by the non-fulfilment of your promises. Various members of our staff have seen you time after time about these castings, many promises have been made but not kept. We have assisted you in all ways possible, our staff have given you technical assistance, we have cut off the headers for you, we have sent our own carts to take deliveries and we have made patterns for you but in spite of all this our output of underframes has been and is still being held up solely for want of your supplies. Finally to safeguard ourselves and to make certain we would at least finish the last 30 sets without undue delays we decided to order elsewhere.

In regard to our action causing you heavy financial loss we would point out that your failure to deliver the goods has and is causing *us* severe financial loss. We would also remind you that these castings are standard articles and should we (as we hope to do) secure further orders for underframes we will take these off your hands provided the type has not been altered in the meanwhile. Should we progress so fast with our underframe orders that we require more sets of casting before the Home supplies arrive we will place orders with you for as many complete sets of casting as we require. We would point out that the best way to bring this condition about is for you to complete your 76 sets with as little delay as possible.

We very much regret we are unable to alter our decision which was only put into effect after it appeared absolutely necessary.

Yours faithfully,

(Sd.)

Managing Agents.

(3) *Letter from the Indian Standard Wagon Company, Limited, and Burn and Company, Limited, dated 6th July 1926.*

We have pleasure in forwarding herewith our replies to your questionnaire on wagons and underframes.

We regret that we have not been able to supply these statements earlier, but we have endeavoured not merely to supply the information required, but also to marshal the labyrinthic detail into a self-interpretative form.

As examples of how we keep our order cost accounts we forward two cost sheets* of two orders for 106 underframes, which were executed simultaneously. We should be obliged if you would regard these cost sheets as confidential because they exhibit information that would be of value to competitors; also, being isolated from the context of overhead expenses as distinct from oncost, erroneous conclusions might be drawn from them.

Statement re questionnaire regarding costs and finance of wagons and underframes.

It will be seen that in all cases it has not been possible to cast the figures exactly in the form prescribed by the Board; nevertheless every endeavour has been made to satisfy the spirit rather than the letter of questionnaire.

Works costs.

Methods of ascertaining costs may be broadly divided into two types:—

(1) Process costing and

(2) Job or order costing.

The former method is applicable to coal mining, pig iron and steel manufacture, chemical manufacture, etc., in such industries the process of manufacture is continuous for regular periods of time and definite factory orders lose their identity and become part of a large volume of production.

On the other hand Engineering Firms, Building Contractors, etc., employ the job or order method because the order is the natural and tangible basis upon which the elements of cost should be charged.

When the process method is applicable, the accounts are closed at regular intervals, say once a month, the total cost of the process during that period ascertained, and then divided by the units of output during that period.

But an order cost is not closed until the job is finished, and to take wagon building as an instance, at the end of any given financial period it is possible for the order cost to include the following:—

(1) Cost of so many completed wagons.
(2) Cost of finished but unassembled parts.
(3) Cost of partly finished parts.

Overhead expenses.

There is a further difference between process costing and job costing. In the former case, circumstances are such that all expenses can be identified with and debited to the single process and product, but in the case of Engineering more than one order is in process of manufacture at any one time and the overhead expenses have to be rateably distributed over all the orders and at the end of the financial year a certain portion of the overhead is carried forward in the value of work-in-progress.

* Not printed.

The overhead expenses are distributed by means of an oncost which is the ratio between Overhead expenses and the total direct wages of the plant when running at its normal capacity. The Overhead expenses of a business tend to stabilise and the volume of business to fluctuate; if the oncost employed were the ratio between the Overhead expenses and the actual volume of direct wages then the oncost would vary from month to month and during periods of trade depression the oncost would be high, the business would lose orders and the work-in-progress carried forward as an asset at the end of the financial period would be artificially inflated. It will be seen therefore that by basing oncosts on the normal capacity of a plant, the Overhead charges account shews surpluses and deficits which would otherwise be smuggled into work-in-progress.

Statements of cost.

We forward specimen copies* of our costs in the form in which they are actually kept. The material has been analysed in the manner prescribed. With the exception of "labour" which is a direct debit to the order and shewn as such, the "cost above materials" and "Overhead charges" referred to in the questionnaire has been expressed as an oncost as previously explained.

In order to meet your request that the information in regard to Works costs should be supplied for "Official years," we have allocated the job costs between Government financial years on the basis of the number of wagons or underframes turned out in each of such years. The costs have next been summarised and tabulated to show the total cost of vehicles in each Government financial year. To these annual costs we have added the losses on charges during the same period.

We also give details of our Overhead expenses, and though for reasons previously stated they are not in the exact form prescribed, we trust they will serve the purpose you have in mind.

Block.

The rates of depreciation taken on the block are as follows:—

3 per cent. on Buildings.
7 per cent. on Machinery.
10 per cent. on Furniture and Fittings and Motor Vehicles.

The above rates of depreciation include no allowance for obsolescence which usually anticipates the destruction of the plant due to wear and tear. The keener the competition the greater grows the necessity of substituting improved plant for old, irrespective of what the actual physical condition of the old plant might be. Burn and Company, Limited, have endeavoured to pursue a very conservative and prudent policy in this respect, and the I. S. W. have reduced their block in view of the large decline in values subsequent to the War. Obsolescence, unlike depreciation, cannot be legislated for by hard and fast flat rates; machines must be dealt with individually, but it is impossible to neglect this dominant factor and be able to face competition from Europe.

Working capital.

Working capital is not a constant save in ideal and very hypothetical circumstances.

The following are the factors which determinate the amount of working capital required at any one time:—

(1) Length of period of manufacture.
(2) Turnover.
(3) Terms of purchase.
(4) Terms of sale.
(5) Facilities for converting current assets into cash.
(6) Seasonal variations.

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* Not printed.

The operation and interaction of the foregoing factors is clearly illustrated in the statements of working capital actually employed.

If the suppliers of raw material and fittings always kept to their promised deliveries, if the railways always supplied wheels and axles in good time and plans and programmes were never disturbed then the working capital of Burn and Company, Limited, would be between Rs. 12 and Rs. 14 lakhs and that of Indian Standard Wagon Company, Limited, between Rs. 14 and Rs. 16 lakhs, but to these figures a factor of safety of at least 2 lakhs should in all cases be added.

In the case of the Indian Standard Wagon Company, Limited, the working capital is provided in three ways:—

(1) Tata material is financed by 90 day bills.
(2) Bank overdrafts are obtained.*
(3) And more recently, undistributed profits have assisted.

The questionnaire seems to indicate that the Board had in mind the provision of working capital by means of debenture loans. But so precarious seems the future of the wagon industry that we have no doubt whatever that it would be impossible for the Indian Standard Wagon Company, Limited, to raise a debenture loan unless it was guaranteed by Burn and Company, or unless the Government of India guaranteed to place, or rather placed with the Indian Standard Wagon Company, Limited, definite orders sufficient to keep the Works in constant employment for say five years.

The Railway Board have recently advised us that in view of the change in design of the standard wagon, instead of calling for tenders in May or June this year as previously promised the call for tenders would be postponed indefinitely as the drawings would not be ready until October. The action of the Railway Board has three results—

(1) All existing jigs and special tools will have to be scrapped and new ones made.
(2) The orders at present in hand will have to be slowed down to prevent a repetition of the 1923 hiatus and the consequent disbandment of our labour force.
(3) Much time and expense will have to be expended in manufacturing experiments on the new designs.

The Standards Committee Report was printed in December 1925, that is to say two months before Sir Charles Innes announced in the assembly that with the idea of assisting Indian Manufacturers tenders would be called for in May or June 1926.

In the circumstances and in view of the fact that the designs are untried and unproved in manufacture, we think that the Government should place orders for the old I. R. C. A. type sufficient to bring the transition stage.

If a new rolling stock company was being floated at the present time we do not think a return of less than 10 per cent. on the capital invested would attract investors; therefore we do not think it unreasonable to expect not less than 8 per cent. on the capital invested, after making provision for depreciation which is a working charge and not merely an allocation of profits.

So precarious has been the fortunes of the rolling stock industry in India that Burn and Company, Limited, prudently took the precaution of reducing their Carriage and Wagon Department block to as low a figure as possible. In the case of Burn and Company, Limited, the replacement value of the block, and not the book value thereof, should be considered.

In the case of the Indian Standard Wagon Company, Limited, the working capital is obtained chiefly by short term loans, and in the case of Burn and Company, Limited, by internal arrangements, so that in both cases the working capital should be considered as an extension of their ordinary share capital, and the assessment of profit made in the same way.

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* On which we pay Bank Rate but with a minimum of 6 per cent.

Enclosure 1.

Allocation of Cost, 1922-23 (Revised).

Description.	Total Wagons (497).		Total Underframes (76).		Total for year.	
	Weight.	Value.	Weight.	Value.	Weight.	Value.
		Rs.		Rs.		Rs.
Materials, Steel—						
Indian	366·12	81,399	296·93	75,216	663·05	1,56,615
Imported British	3213·02	11,55,523	1021·64	2,91,571	4234·66	14,47,094
„ Continental	35·60	17,070	...	...	35·60	17,070
Castings—						
Indian	59·23	72,161	53·52	42,674	112·75	1,14,835
Imported British	123·26	1,67,285	70·32	87,939	193·58	2,55,224
„ Continental	31·85	44,733	2·77	2,426	34·62	47,159
Fittings—						
Indian	...	...	...	2,006	...	2,006
Imported British	...	7,64,154	...	2,43,228	...	10,07,382
„ Continental	...	...	...	...	...	...
Other Materials—						
Indian	...	32,244	...	8,240	...	40,484
Imported	...	28,023	...	19,111	...	47,134
Stores, etc.	...	2,928	...	2,247	...	5,175
Total Materials	...	23,65,520	...	7,74,658	...	31,40,178
Cost above Materials (as per Schedule No. 1)	...	11,27,018	...	4,83,577	...	16,10,595
Overhead Charges (as per Schedule No. 2)	...	...	...	...	...	...
GRAND TOTAL	...	...	...	...	...	..
				Less for Work-in-Progress		1,55,308

Schedule No. I.

Cost above materials 1922-23.

Description.	For 497 Wagons.	For 76 Underframes.	Total.
	Rs.	Rs.	Rs.
Direct Labour	2,88,675	1,22,876	4,11,551
Power	1,74,157	74,638	2,48,795
Fuel	1,13,067	48,456	1,61,523
Repairs—			
Building	2,027	869	2,896
Machinery	56,280	24,120	80,400
Electric	4,234	1,815	6,049
General Work	96,305	41,274	1,37,579
Non-Productive Wages	1,14,037	18,873	1,62,910
Other Orders	296	127	423
Supervision—			
Europeans	81,761	35,041	1,16,802
Anglo-Indians and Indians	80,637	34,559	1,15,196
Sundry Works Charges (as per Schedule 1A).	80,701	34,586	1,15,287
Jigs, Dies and Tools	34,491	13,824	48,315
Despatching Charges	350	2,519	2,869
Total	11,27,018	4,83,577	16,10,595

Schedule No. 2.

Overhead Charges, 1922-23.

Description.	For 497 Wagons. 70%.	For 76 Underframes. 30%.	Total.
	Rs.	Rs.	Rs.
Depreciation—			
Buildings	6,850	2,935	9,785
Machinery	41,364	17,728	59,092
Other Plants	2,915	1,245	4,160
Head Office Charges—			
Managing Agency Fees	8,002	3,429	11,431
C. O. Expenses	29,915	12,821	42,736
Total	89,046	38,158	1,27,204

The above figures do not include interest on our Working Capital which we estimate at Rs. 14 Lakhs.

Enclosure 2.

Allocation of Cost, 1923-24 (Revised.)

Description.	Total Wagons (248).		Total Underframes (104).		Total for year.	
	Weight.	Value.	Weight.	Value.	Weight.	Value.
Materials, Steel—		Rs.		Rs.		Rs.
Indian	360·45	68,204	272·71	49,763	633·16	1,17,967
Imported British	1378·63	3,48,048	1388·62	3,32,668	2767·25	6,80,716
„ Continental	1·00	298	...	...	1·00	298
Castings—						
Indian	26·24	33,557	80·39	57,390	106·63	90,947
Imported British	64·79	57,583	114·29	1,12,691	179·08	1,65,274
„ Continental	...	...	2·77	2,426	2·77	2,426
Fittings—						
Indian	..		..	2,212	.	2,212
Imported British	.	2,87,401	..	2,79,673	...	5,67,074
„ Continental	...	...	...	...	...	...
Other Materials—						
Indian	.	19,572	...	10,987	.	30,559
Imported	...	21,083	...	18,727	...	39,810
Stores, etc.	...	985	...	8,428	...	9,413
Total Materials	...	8,31,731	...	8,74,965	...	17,06,696
Cost above Materials (as per Schedule No. 1)	...	7,02,728	...	6,55,744	...	13,58,472
Overhead Charges (as per Schedule No. 2)	...	...	...	...	...	...
GRAND TOTAL	...	...	...	...	..	...
				Less for Work-in-Progress		2,88,963

Schedule No. 1.

Cost above Materials, 1923-24.

Description.	For 248 Wagons.	For 104 Underframes.	Total.
	Rs.	Rs.	Rs.
Direct Labour	1,21,725	1,49,009	2,70,734
Power	1,30,417	1,06,705	2,37,122
Fuel	81,142	66,389	1,47,531
Repairs—			
Buildings	1,242	1,017	2,259
Machinery	33,998	27,816	61,814
Electric	3,245	2,656	5,901
General Work	68,143	55,754	1,23,897
Non-Productive Wages	87,553	71,633	1,59,186
Other Orders	65	53	118
Supervision—			
Europeans	58,734	48,055	1,06,789
Anglo-Indians and Indians	58,263	47,669	1,05,932
Sundry Works Charges (as per Schedule 1A).	53,795	65,750	1,19,545
Jigs, Dies and Tools	4,183	12,455	16,638
Despatching Charges	223	783	1,006
Total	7,02,728	6,55,744	13,58,472

Schedule No. 2.

Overhead Charges, 1923-24.

Description.	For 248 Wagons. 45 %	For 104 Underframes. 55%	Total.
	Rs.	Rs.	Rs.
Depreciation—			
Buildings	4,345	5,304	9,649
Machinery	27,057	33,070	60,127
Other Plants	1,554	1,901	3,455
Head Office Charges—			
Managing Agency Fees	9,720	11,880	21,600
C. O. Expenses	14,968	18,295	33,263
Total	57,644	70,450	1,28,094

The above figures do not include interest on our Working Capital which we estimate at Rs. 14 lakhs.

Enclosure 3.

Allocation of Cost, 1924-25 (Revised).

Description.	Total Wagons (397).		Total Underframes (95).		Total for Year.	
	Weight.	Value.	Weight.	Value.	Weight.	Value.
Materials, Steel—		Rs.		Rs.		Rs.
Indian	1334·52	2,28,716	1180·16	1,98,971	2514·68	4,27,687
Imported British	1446·53	3,11,737	219·49	46,152	1666·02	3,57,389
„ Continental	2·77	833	...	...	2·77	833
Castings—						
Indian	41·25	24,704	114·66	53,050	155·91	77,754
Imported British	154·80	1,34,663	83·85	68,897	238·65	2,03,560
„ Continental	27·71	14,334	...	...	27·71	14,334
Fittings—						
Indian	...	52,427	...	5,853	...	58,280
Imported British	...	2,93,942	...	2,17,507	...	5,11,449
„ Continental	...	...	...	...	...	...
Other Materials—						
Indian	...	20,716	...	11,778	...	32,494
Imported	...	36,014	...	19,551	...	55,565
Stores, etc.	...	4,984	...	8,831	...	13,815
Total Materials	...	11,23,070	...	6,30,590	...	17,53,660
Cost of above Materials (as per Schedule No. 1)	...	7,55,004	...	5,05,771	...	12,60,775
Overhead Charges (as per Schedule No. 2)	...	...	...	...	...	...
GRAND TOTAL	...	...	...	...	...	...
				Less for Work-in-Progress		96,936

Schedule No. 1

Cost above Materials, 1924-25.

Description.	For 397 Wagons.	For 95 Underframes.	Total.
	Rs.	Rs.	Rs.
Direct Labour	1,69,383	1,12,895	2,82,278
Power	1,10,692	73,794	1,84,486
Fuel	68,098	45,400	1,13,498
Repairs—			
Buildings	1,703	1,135	2,838
Machinery	34,275	22,850	57,125
Electric	3,495	2,330	5,825
General Work	73,726	49,151	1,22,877
Non-Productive Wages	87,063	58,043	1,45,106
Other Orders	97	65	162
Supervision—			
Europeans	62,208	41,472	1,03,680
Anglo-Indians and Indians	62,113	41,409	1,03,522
Sundry Works Charges (as per Schedule 1A).	67,444	44,963	1,12,407
Jigs, Dies and Tools	14,598	11,762	26,360
Despatching Charges	109	502	611
Total	7,55,004	5,05,771	12,60,775

Schedule No. 2.

Overhead Charges, 1924-25.

Description.	For 397 Wagons. 60%.	For 95 Underframes. 40%.	Total.
	Rs.	Rs.	Rs.
Depreciation—			
Buildings	5,680	3,786	9,466
Machinery	37,463	24,976	62,439
Other Plants	1,582	1,058	2,640
Head Office Charges—			
Managing Agency Fees	11,160	7,440	18,600
C. O. Expenses	19,840	13,226	33,066
Total	75,725	50,486	1,26,211

The above figures do not include interest on our Working Capital which we estimate at Rs. 14 lakhs.

Enclosure 4.

Allocation of Cost, 1925-26 (Revised).

Description.	Total Wagons (418).		Underframe Normal (81).		Underframe Small (26).		Total for year.	
	Weight.	Value.	Weight.	Value.	Weight.	Value.	Weight.	Value.
		Rs.		Rs.		Rs.		Rs.
Materials, Steel—								
Indian	2258·35	3,85,211	1088·86	1,66,529	45·78	6,954	3392·99	5,58,694
Imported British	285·48	63,981	155·20	18,628	...	...	400·68	82,609
,, Continental	...	...	..	...	...	...	...	...
Castings—								
Indian	30·25	2,510	31·83	9,899	·07	5	62·15	12,414
Imported British	100·85	1,04,540	62·11	53,023	...	...	162·96	1,57,563
,, Continental	87·75	45,393	68·68	22,984	...	...	156·43	68,377
Fittings—								
Indian	...	...	...	806	...	..	...	806
Imported British	...	3,35,235	...	1,37,366	...	...	...	4,72,601
,, Continental	...	...	...	...	...	...	...	...
Other Materials—								
Indian	...	18,284	...	13,396	...	323	...	32,003
Imported British	...	32,048	...	17,416	...	725	...	50,189
Stores, etc.	...	2,315	...	1,244	...	...	...	3,559
Total Materials	...	9,89,517	...	4,41,291	...	8,007	...	14,38,815
Cost above Materials (as per Schedule No. 1).	...	6,90,768	...	4,07,466	...	11,371	...	11,09,605
Overhead Charges (as per Schedule No. 2).	...	...	...	...	...	...	...	...
GRAND TOTAL	...	...	...	...	...	...	...	...
						Less for Work-in-Progress		2,12,342

Schedule No. 1.

Cost above Materials, 1925-26.

Description.	For 418 Wagons.	For 81 Under-frames Normal.	For 26 Under-frames Small.	TOTAL.
	Rs.	Rs.	Rs.	Rs.
Direct Labour	1,56,352	93,413	2,909	2,52,674
Power	93,168	55,601	1,503	1,50,272
Fuel	52,348	31,240	844	84,432
Repairs—				
Buildings	3,840	2,292	62	6,194
Machinery	36,164	21,581	583	58,328
Electric	3,686	2,199	59	5,944
General Work	65,287	38,961	1,053	1,05,301
Non-Productive Wages	80,696	48,157	1,302	1,30,155
Other Orders	85	51	1	138
Supervision—				
Europeans	56,764	33,876	915	91,555
Anglo-Indians and Indians	59,108	35,274	954	95,336
Sundry Works charges (as per Schedule 1-A).	69,091	41,232	1,114	1,11,437
Jigs, Dies and Tools	14,131	3,463	...	17,594
Despatching Charges	47	126	72	245
TOTAL	6,90,768	4,07,466	11,371	11,09,605

Schedule No. 2.

Overhead Charges, 1925-26.

Description.	For 418 Wagons. 62 per cent.	For 81 Under-frames Normal. 37 per cent.	For 26 Under-frames Normal. 1 per cent.	TOTAL.
	Rs.	Rs.	Rs.	Rs.
Depreciation—				
Buildings	5,845	3,485	94	9,424
Machinery	39,321	23,466	634	63,421
Other Plants	2,251	1,344	36	3,631
Head Office Charges—				
Managing Agency Fees	14,136	8,436	228	22,800
C. O. Expenses	28,831	17,206	465	46,502
TOTAL	90,384	53,937	1,457	1,45,778

The above figures do not include interest on our Working Capital which we estimate at Rs. 14 lakhs.

Schedule 1-A.

Sundry Works Charges.

Description.	1922-23.		1923-24.		1924-25.		1925-26.		
	For 497 Wagons.	For 76 Under-frames.	For 104 Under-frames.	For 248 Wagons.	For 397 Wagons.	For 95 Under-frames.	For 488 Wagons.	For 81 Under-frames Normal.	For 26 Under-frames. Small.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Charges (Sundries)	16,195	6,940	17,347	14,193	16,123	10,749	14,153	8,446	228
Advertisement	1,875	804	1,963	1,606	1,376	918	2,033	1,214	33
Berhampore Agency Charges	882	378	669	548	743	496	790	471	13
Bombay Agency Charges	32	13	30	24	35	23	36	21	1
Burn's Assistants' Club	5,268	2,258	3,652	2,988	3,785	2,524	3,719	2,219	60
Bad Debt	158	68	...	...	63	42	...	...	...
Cart Hire	—3,614	—1,549	—1,920	—1,570	—3,050	—2,033	—2,424	—1,446	—39
Despatch Office Charges	—1,173	—502	—542	—444	—650	—434	—777	—464	—13
Demurrage	...	...	...	...	—3	—2	...	...	...
Insurance	878	376	1,232	1,008	554	369	434	259	7
Law Charges	2,216	949	1,334	1,091	128	86	111	67	2
Magazine	2,219	951	—119	—98	1,394	930	2,379	1,419	40
Medical Charges	967	414	296	242	281	187	281	138	4
Newpapers	93	40	74	60	107	71	123	73	2
Postal Charges	519	222	354	290	415	277	441	263	7
Patent Charges	395	169	239	196	158	104	119	71	2

Description.	1922-23.		1923-24.		1924-25.		1925-26.		
	For 497 Wagons.	For 76 Under-frames.	For 104 Under-frames.	For 248 Wagons.	For 397 Wagons.	For 95 Under-frames.	For 488 Wagons.	For 81 Under-frames Normal.	For 26 Under-frames Small.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs	Rs.
Passage	...	...	...	...	536	357	302	180	5
Pension	604	259	762	624	732	488	814	486	13
Rent	7,990	3,424	6,071	4,968	5,455	3,636	5,891	3,516	... 95
Railway Freight (General)	10	5	..	...	...	...	368	220	6
Rangoon Office Agency Charges	2,207	946	1,488	1,217	3,191	2,128	6,283	3,750	101
Unclaimed Wages	—213	—90	—270	—108	—95	—63	—96	—57	—2
Sundry Expenses	6,541	2,803	3,821	3,126	7,865	5,243	6,405	3,823	103
Subscription	913	391	728	596	605	404	835	498	13
South Indian Agency Charges	504	216	363	297	468	312	447	266	7
Tax	6,879	2,948	6,643	5,436	7,162	4,775	7,396	4,414	119
Telephone	151	65	1,095	895	164	109	1,178	703	19
Telegram	69	30	33	27	24	16	62	37	1
Tender	118	50	59	48	132	88	209	125	3
License	268	115	172	141	285	190	278	166	4
Khoraki	...	...	...	...	191	127	244	145	4
Standing Order Debits	27,750	11,892	20,114	16,456	19,264	12,842	17,107	10,209	276
TOTAL	80,701	34,586	65,750	53,795	67,444	44,963	69,091	41,232	1,114

Analysis of Carriage Underframes and Bogies and Wagons completed and billed.

Year 1922-23.

107	Underframes and 214 Bogies	B. G
30	„ „ 60 „	M. G.
450	A-2 Type Wagons	B. G.
40	C-2 „ „	..
300	A-1 „ „	„

Year 1923-24.

121	Underframes and 242 Bogies	B. G.
67	A-1 Wagons	„
100	A-2 „	„
150	M. A-2 „	M. G.
40	C-3 „	B. G.
10	Underframes and 20 Bogies	M. G.

Year 1924-25.

139	Underframes and 278 Bogies	B. G.
33	Bogies L. S. O. Wagons	„
195	C-2 Wagons	„
550	A-2 „	„
150	M. A-2 Wagons	M. G.

Year 1925-26.

550	A-2 Wagons	B. G.
53	Underframes and 106 Bogies	„
26	Underframes only	„

Particulars.	1922-23.	1923-24.	1924-25.	1925-26.
	Rs.	Rs.	Rs.	Rs.
Salaries—				
Europeans	98,003	89,135	86,074	73,997
Indians and Anglo-Indians	72,646	66,074	63,804	54,853
Wages—				
Menials	1,294	1,320	1,362	1,486
Repairs and Renewals of—				
Buildings	2,896	2,259	2,838	6,194
Machinery	80,400	61,814	57,125	58,328
Electric Installation	6,049	5,901	5,825	5,944
General Work	1,37,579	1,23,897	1,22,877	1,05,301
Non Productive Wages	1,15,154	1,06,970	94,179	80,410
Other Orders	423	118	162	138
Sundry Expenses	9,344	6,947	13,108	10,331
Coal and Coke	1,60,335	1,46,886	1,13,117	84,095
Power	2,48,347	2,36,678	1,84,040	1,50,005
TOTAL	9,32,470	8,47,999	7,44,511	6,31,082
Depreciation—				
Building	9,229	8,851	8,402	8,034
Machinery	26,396	23,478	21,671	20,780
TOTAL	35,625	32,329	30,073	28,814
GRAND TOTAL	9,68,095	8,80,328	7,74,584	6,59,896

General Charges.

Particulars.	1922-23.	1923-24.	1924-25.	1925-26.
Salaries—	Rs.	Rs.	Rs.	Rs.
Europeans	62,663	58,848	58,686	58,529
Indians and Anglo-Indians	1,41,834	1,32,859	1,32,392	1,34,945
Wages	58,736	57,187	54,981	54,605
Charges	77,118	1,05,135	89,572	76,090
Advertisement	8,931	11,897	7,645	10,934
Berhampore Agency Charges	4,199	4,058	4,130	4,248
Bombay Agency Charges	150	180	195	195
Burn's Assistants Club	25,087	22,132	21,030	19,994
Bad Debt	752	..	349	...
Cart Hire	*17,208*	*11,632*	*16,942*	*13,030*
Despatch Office Charges	*5,582*	*3,286*	*3,612*	*4,181*
Demurrage	..	..	17	..
Insurance	4,179	7,465	3,075	2,334
Law Charges	10,550	8,085	712	600
Magazine	10,566	*724*	7,747	12,793
Medical Charges	4,602	1,792	1,559	1,244
Newspaper	442	448	595	660
Postal Charges	2,471	2,148	2,307	2,370
Patent Charges	1,881	1,450	872	641
Passage	..	..	2,977	1,623
Pension	2,877	4,619	4,066	4,391
Rent	38,048	36,79	30,302	31,672
Railway Freight (General)	50	..	..	1,980
Rangoon Office Agency Charges	10,510	9,016	17,730	33,780
Unclaimed Wages	*1,009*	*1,260*	*527*	*519*
Subscription	4,345	4,413	3,362	4,485
South Indian Agency Charges	2,400	2,200	2,600	2,400
Tax	32,758	40,263	39,789	39,764
Carried over	4,81,350	4,94,089	4,65,609	4,82,547

Enclosure 7. *General Charges.*

Particulars.	1922-23.	1923-24.	1924-25.	1925-26.
	Rs.	Rs.	Rs.	Rs.
Brought forward .	4,81,350	4,94,089	4,65,609	4,82,547
Telephone	721	6,635	911	6,329
Telegram	331	199	134	330
Tender	556	357	736	1,121
License	1,278	1,043	1,582	1,492
Khoraki	..	..	1,061	1,310
Standing Order Debits	1,32,140	1,21,899	1,07,021	91,972
Yard Expenses. (Less recovered by Shop Charges) . .	48,189	50,146	56,253	57,066
Maintenance (Less recovered by Shop Charges) . . .	28,475	33,332	22,465	21,145
Electrical	19,472	28,989	31,520	28,048
Power	1,493	1,479	1,488	889
Coal and Coke	3,961	2,151	1,269	1,125
TOTAL .	7,17,966	7,40,319	6,90,049	6,93,374
Calcutta Office Agency Charges (Managing Agency Fees) . .	38,102	72,000	62,000	76,000
Calcutta Office General Charges	1,42,453	1,10,876	1,10,220	1,55,007
Depreciation on Building	3,899	3,134	2,522	2,384
Depreciation on Machinery	3,405	2,187	1,944	1,624
Sundry other Depreciation	11,269	8,794	6,046	9,351
TOTAL .	1,99,128	1,96,991	1,82,732	2,44,366
GRAND TOTAL .	9,17,094	9,37,310	8,72,781	9,37,740

* 30 per cent. debited to C. W. Dept.

Enclosure 8. *Allocation of Calcutta Office General Charges.*

Particulars.	1922-23.	1923-24.	1924-25.	1925-26.
	Rs.	Rs.	Rs.	Rs.
Salary	84,513	70,083	60,675	79,954
Postage, Printing and Stationery	9,985	11,624	10,771	13,363
Office Rent	641	289	2,484	17,951
House Rent	4,132	6,617	5,603	6,097
Subscription	14,296	6,079	6,360	7,592
Fees	1,664	1,469	1,663	1,795
Sundries	28,474	15,883	22,664	28,255
TOTAL	1,42,453	1,10,876	1,10,220	1,55,007

Enclosure 9. *Carriage and Wagon Department Working Capital.*

Month.	Work-in-Progress on 1st day of Month.	Debits to W. I. P. during Month	Gross Work-in-Progress on Last Day of Month.	*Deduct Cost of Vehicles completed and billed in Month.*	(*a*) Net Value of W. I. P. on Last Day of Month	(*b*) Bills Receivable Outstanding on Last Day of Month	(*c*) Average Value of Stores Stock.	Working Capital being the sum of (*a*), (*b*) and (*c*).
1923—	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
May	16,47,835	1,69,756	18,17,591	*2,21,591*	15,96,000	1,86,183	1,40,000	19,22,183
June	15,96,000	1,51,058	17,47,058	*3,89,666*	13,57,392	4,73,419	„	19,70,811
July	13,57,392	2,20,565	15,77,957	*2,87,843*	12,90,114	2,28,803	„	16,58,917
August	12,90,114	1,30,453	14,20,567	*3,41,939*	10,78,628	3,07,580	„	15,26,108
September	10,78,628	1,43,224	12,21,852	*2,78,332*	9,43,520	4,54,180	„	15,37,700
October	9,43,520	97,587	10,47,107	*71,642*	9,69,465	3,10,498	„	14,19,963
November	9,65,465	93,414	10,58,879	*73,075*	9,85,804	1,57,778	„	12,83,582
December	9,85,804	1,79,235	11,65,039	*1,47,199*	10,17,840	2,60,207	„	14,18,047
1924—								
January	10,17,840	2,05,827	12,23,667	..	12,23,667	1,49,902	„	15,13,569
February	12,23,667	1,13,653	13,37,320	*2,80,924*	10,56,396	1,56,506	„	13,52,902
March	10,56,396	1,78,964	12,35,350	*1,77,667*	10,57,673	1,79,667	„	13,77,340
April	10,57,673	1,60,057	12,17,730	*3,42,301*	8,75,429	5,21,968	„	15,37,397
May	8,75,429	1,99,053	10,74,482	*1,31,531*	9,42,951	5,14,440	„	15,97,391
June	9,42,951	2,17,434	11,60,385	*17,537*	11,42,848	2,34,862	„	15,17,710
July	11,42,848	2,93,249	14,36,097	..	14,36,097	..	„	15,76,097
August	14,36,097	2,53,350	16,89,447	..	16,89,447	..	„	18,29,447
September	16,89,447	2,62,571	19,52,018	..	19,52,018	..	„	20,92,018
October	19,52,018	2,11,720	21,63,738	..	21,63,738	..	„	23,03,738
November	21,63,738	3,03,512	24,67,250	*2,51,837*	22,15,413	1,56,374	„	25,11,787
December	22,15,413	3,53,552	25,68,965	*1,71,256*	23,97,709	1,70,246	„	27,07,955
1925—								
January	23,97,709	3,18,917	27,16 626	*6,38,038*	20,78,588	6,96,594	„	29,15,182
February	20,78,588	2,96,171	23,74,759	*3,36,455*	20,38,304	5,01.587	„	26,79,891
March	20,38,304	3,67,681	24,05,985	*8,05,830*	16,00,155	5.56,203	„	22,96,358
April	16,00,155	2,88,742	18,88,897	*3,51,215*	15,37,682	6,13,139	„	22,90,821
May	15,37,682	1,69,116	17,06,798	*2,36,807*	14,69,991	6,06,541	„	22,16,532
June	14,69,991	1,56,970	16,26,961	*2,92,911*	13,34.050	5,20,810	„	19,94,860
July	13,34,050	1,60,144	14,94,194	*2,93,960*	12,00,234	4,66,689	„	18,06,933
August	12,00,234	2,03,264	14,03,496	*1,53,600*	12,49,898	1,18,846	„	15,08,744
September	12,49,898	2,69,159	15,18,057	*2,39,329*	12,78,728	1,68,857	„	14,87,585
October	12,78,728	1,73,809	14,52,537	*57,726*	13,94,811	90,844	„	13,85,655
November	13,94,811	1,02,596	14,97,407	*28,621*	14,68,786	76,600	„	15,85,386
December	14,68,786	2,86,933	17,55,719	..	17,55,719	54,118	„	19,49,837

Enclosure 10. *Capitalization.*

Capital Authorized, Issued and Subscribed.

		Rs.	a.	p.
6,000	7 per cent. Preference Shares of Rs. 100 each, fully paid up	6,00,000	0	0
7,000	7 per cent. Preference Shares of Rs. 100 each, fully paid up	7,00,000	0	0
15,000	6 per cent. Preference Shares of Rs. 100 each, fully paid up	15,00,000	0	0
42,000	Ordinary Shares of Rs. 100 each, fully paid up . .	42,00,000	0	0
		70,00,000	0	0

Enclosure 11.

Statement of C. W. Block. (Revised.)

Year.	Description.	Lands.	Buildings.	Machinery.	Miscellaneous.	TOTAL.	DEPRECIATION.			
							Buildings. 2½	Machinery. 7½	Miscellaneous. 10	TOTAL.
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1922-23	Opening Balance	2,17,529	3,38,827	7,52,589	6,643	13,15,588	...	...	...	...
	Additions	...	5,772	21,686	1,146	28,604	...	...	...	...
		2,17,529	3,44,599	7,74,275	7,789	13,44,192	8,615	58,071	779	67,465
1923-24	Opening Balance	2,17,529	34,4,599	7,74,275	7,789	13,44,192	...	...	...	...
	Additions	...	3,773	25,340	381	29,494	...	...	...	...
		2,17.529	3.48,372	7,99,615	8,170	13,73,686	8,709	59,471	817	68,997
1924-25	Opening Balance	2,17,529	3,48,372	7,99,615	8,170	13,73,686	...	...	...	...
	Additions	...	...	25,135	91	25,226	...	...	...	...
		2,17,529	3,48,372	8,24,750	8,261	13,98,912	8,709	61,856	826	71,391
1925-26	Opening Balance	2,17,529	3,48,372	8,24,750	8,261	13,98,912	...	...	...	...
	Additions	...	...	14 370	...	14,370	...	...	...	...
		2,17,529	3,48,372	8,39,120	8,261	14,13,282	8,709	62,934	826	72,469
	Replacement Value	15,94,000	6,88,305	16,64,108	10,000	39,56,413	17,208	1,24,807	1,000	1,43,015

Enclosure 1.

THE INDIAN STANDARD WAGON CO., LTD.

Costs of Wagon Orders.

Description.	1,250 Wagons.				Total for 1,250 Wagons.		425 Wagons, 1925-26.		Total for 1,675 Wagons.	
	230 in 1924-25.		1,020 in 1925-26.							
	Weight.	Cost.	Weight.	Cost.	Weight.	Cost.	Weight.	Cost.	Weight.	Cost.
Materials.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.
Sectional Steel—										
Indian	1301·43	2,21,846	5771·56	9,83,836	7072·99	12,05,682	2579·35	4,06,080	9652·37	16,11,762
Imported British	77·81	19,254	345·07	85,385	422·88	1,04,639	235·79	58,911	658·67	1,63,550
Castings—										
Indian	1·82	1,618	8·06	7,178	9·88	8,796	0·23	215	10·11	9,011
Imported British	102·57	81,786	454·89	3,62,703	557·46	4,44,489	180·20	1,47,986	737·66	5,92,475
Fittings—										
Indian	..	14,061	..	62,360	..	76,421	..	22,795	..	99,216
Imported British	..	1,65,445	..	7,33,686	..	8,99,131	..	1,22,400	..	10,21,531
Other Materials—										
Indian	..	10,461	..	46,392	..	56,853	..	15,044	..	71,897
Imported British	..	22,287	..	98,836	..	1,21,123	..	35,017	..	1,56,130
Stores, etc.	..	790	..	3,503	..	4,293	..	1,373	..	5,666
Wages	..	68,238	..	3,02,631	..	3,70,869	..	1,43,152	..	5,14,021
Charges	..	1,36,476	..	6,05,262	..	7,41,738	..	2,86,304	..	10,28,042
Total	..	7,42,262	..	32,91,772	..	40,34,034	..	12,39,277	..	52,73,311
Add—										
Loss on Charges	..	4,64,145	..	1,29,413	..	5,93,558	..	1,41,740	..	7,35,298
Payment to Sinking Fund	..	..	..	42,353	..	42,353	..	17,647	..	60,000
Total Cost	..	12,06,407	..	34,63,538	..	46,69,945	..	13,98,664	..	60,68,609

Enclosure 2.

Schedule 1.

Sundry Expenses.

Particulars.	1st August 1924 to 31st March 1925.	Year 1925-26.
	Rs.	Rs.
Bungalow Lighting	915	1,463
Estimating Department Expenses	43	..
Insurance General	812	1,165
" Workmen's Compensation	1,056	2,326
Law Charges	3,228	1,250
Medical Charges	4,558	5,070
Messing	970	309
Motor Car Expenses	279	325
Passages	..	2,472
Postage and Telegram	1,326	2,216
Periodicals	4	..
Printing and Stationery	3,222	4,374
Rents and Taxes	7,680	7,774
Rest House Expenses	1,500	1,821
Road Repairs	1,520	2,021
Sundries	828	4,894
Telephone Charges	321	517
Travelling Expenses	2,658	1,228
Water Purchased	4,000	6,214
TOTAL	34,920	45,439

Schedule 2.

Overhead Charges.

Description.	230 Wagons 1924-25.	1020 Wagons 1925-26.	Total 1250 Wagons.	425 Wagons 1925-26.	Total 1675 Wagons.
Depreciation—	Rs.	Rs.	Rs.	Rs.	Rs.
Buildings	35,064	35,727	70,791	16,813	87,604
Machinery	1,43,036	1,45,897	2,88,933	68,858	3,57,791
Other Plant	23,707	24,181	47,888	11,380	59,268
Total Depreciation	2,01,807	2,05,805	4,07,612	97,051	5,04,663
Head Office Charges—					
Managing Agency Fees	*36,000	48,960	84,960	23,040	1,08,000
Calcutta Office Expenses	16,560	16,649	33,209	8,224	41,433
London Office Expenses	—12,870	8,058	—4,812	3,792	—1,020
TOTAL Rs.	2,41,497	2,79,472	5,20,969	1,32,107	6,53,076

* According to the articles of Association Managing Agency Fees of Rs. 12,000 per month are payable, but only half (Rs. 6,000) per month is now debited and Rs. 18,000 (representing half of the above amount from 1st January to 31st March) has since been written back.

The above figures do not include interest on our Working Capital, which we estimate at Rs. 16,00,000, or interest on Debenture Loan of Rs. 12,00,000 or Sinking Fund.

Enclosure 3. *Charges Account.*

Particulars.	1st August 1924 to 31st March 1925.	Year 1925-26.
	Rs.	Rs.
Salaries—		
European	55,840	1,21,420
Anglo-Indian and Indian	40,140	91,280
Repairs and Maintenance—		
(*a*) Buildings	4,990	9,390
(*b*) Plant and Machinery	54,550	82,650
(*c*) Furnace and Flues	2,570	4,780
(*d*) Other Plant	20,600	31,280
Non-Productive Wages	32,470	82,270
General Shop Supplies	39,110	98,660
Coal and Coke	24,430	57,560
Power	26,370	72,940
TOTAL	3,01,070	6,52,230
Sundries as per Schedule	34,920	45,440
Managing Agency Fees	36,000*	72,000
Calcutta Office Expenses	16,560	24,870
London Office Expenses	*12,870*	11,850
Interest on Loan	55,690	80,120
Interest on Overdraft	12,450	3,580
TOTAL	1,42,750	2,37,860
Depreciation—		
Buildings	45,460	66,480
Machinery	1,82,890	2,65,350
Other Block	1,700	2,300
TOTAL	2,30,050	3,34,130
GRAND TOTAL	6,73,870	12,24,220

* Rs. 12,000 per month debited from 1st January 1925 but half was written back.

Enclosure 4.

Working Capital.

—	Bills Uncollected.	Personal Accounts.	Stocks.		Loose Plant and Tools.	Work-in-Progress.	Total.
			General.	Reserved.			
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1924—							
April	97,900	900	1,38,800	..	11,000	32,900	2,81,500
May	97,900	1,300	1,21,700	..	11,000	17,700	2,49,600
June	1,04,700	1,400	1,21,600	..	11,000	15,900	2,54,600
July	96,700	2,100	1,22,200	..	11,000	22,900	2,54,900
August	68,100	2,100	2,09,600	..	11,000	25,600	3,17,400
September	77,900	2,400	2,01,100	..	11,000	42,600	3,35,000
October	1,00,200	1,200	1,91,100	19,800	11,000	1,21,200	4,44,500
November	83,700	1,700	1,84,900	48,300	11,000	1,85,900	5,15,500
December	92,300	1,200	1,79,200	1,22,700	11,000	3,70,800	7,77,200
1925—							
January	82,900	900	1,72,500	3,42,200	11,000	5,31,900	11,41,400
February	1,08,400	14,200	1,69,000	5,81,000	11,000	5,33,200	14,16,800
March	1,70,000	1,000	1,75,800	6,11,100	11,000	4,91,600	14,60,500
April	1,61,000	5,000	1,67,400	6,60,000	5,500	4,35,100	14,34,000
May	94,900	5,000	1,37,200	8,10,000	5,500	3,70,000	14,22,600
June	54,350	5,000	1,21,200	9,60,000	5,500	3,20,700	14,66,750
July	26,800	9,200	88,200	10,94,300	5,500	5,21,900	17,45,900
August	1,87,600	32,900	81,600	6,66,200	5,500	5,00,400	14,74,200
September	2,64,700	5,700	75,900	5,55,000	5,500	5,80,800	14,87,600
October	55,800	5,500	1,68,400	3,45,200	5,500	4,95,600	10,76,000
November	2,03,300	5,800	1,53,700	3,18,000	5,500	4,26,700	11,13,000
December	1,87,400	200	1,94,400	2,57,200	5,500	3,93,100	10,37,800
1926—							
January	1,83,600	700	1,86,500	2,70,200	5,500	3,26,100	9,72,600
February	47,400	2,900	1,87,400	2,01,900	5,500	2,44,000	6,89,100
March	42,700	200	2,21,800	2,98,700	5,500	6,72,300	12,41,200

Enclosure 5. *Capitalization.*

	Rs.
Original Capital—	
Preference Shares	20,00,000
Ordinary ,, ...	40,00,000
	60,00,000
Reduced Capital—	
Preference Shares	20,00,000
Ordinary ,, ...	10,00,000
	30,00,000

NOTE.—The Company has also a floating Debenture Loan of Rs. 12 Lakhs which is subject to variation.

Enclosure 6.

Statement of Block. (*Revised*).

Year.	Description.	Land.	Building.	Machinery.	Miscellaneous.	Total.	Depreciation.			
							Buildings. (2½)	Machinery. (7½)	Miscellaneous. (10)	Total.
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1921-22	Opening Balance	2,09,430	22,02,867	43,33,632	5,73,259	73,19,188				
	Capital Reduction	..	4,03,000	18,97,424	1,80,000	24,80,424				
		2,09,430	17,99,867	24,36,208	3,93,259	48,38,764	44,997	1,82,716	34,851	2,62,564
1922-23	Opening Balance	2,09,430	17,99,867	24,36,208	3,93,259	48,38,764				
	Additions	15,833	3,02,823	4,00,296	61,668	8,40,620				
		2,25,263	21,02,690	28,36,504	4,54,927	56,79,384	52,567	2,12,737	35,561	3,00,865
1923-24	Opening Balance	2,25,263	21,02,690	28,36,504	4,54,927	56,79,384				
	Additions or Sales	...	1,160	—30,985	—9,817	—642				
		2,25,263	21,03,850	28,05,519	4,45,110	56,78,742	52,596	2,10,414	35,561	2,98,571
1924-25	Opening Balance	2,25,263	21,03,850	28,05,519	4,45,110	56,78,742				
	Additions or Sales	...	...	56,191	—7,160	49,031				
		2,25,263	21,03,850	28,61,710	4,37,950	57,27,773	52,596	2,14,628	35,561	3,02,785
1925-26	Opening Balance	2,25,263	21,03,850	28,61,710	4,37,950	57,27,773				
	Additions or Sales	...	—2,246	—976	3,582	360				
		2,25,263	21,01,604	28,60,734	4,41,532	57,28,133	52,540	2,14,555	35,561	3,02,656

Analysis of Miscellaneous.

Roads	31,317	...	Depreciation	*Nil.*	
Water Works	43,427	...	,,	2½ per cent.	=1,086
Permanent Way	2,23,960	..	,,	8½ ,,	=19,887
Motor Vehicles	79,658	...	,,	15 ,,	=11,948
Furniture	38,591	...	,,	5 ,,	=1,930
					34,851 for 1st year.
Drains and Drainage	28,393	...	,,	2½ ,,	= 710
					35,561

(4) *Letter from Messrs. Burn and Company and the Indian Standard Wagon Company, Limited, dated the 17th July 1926, to the Secretary, Tariff Board.*

We enclose herewith for your information copy of our letter OM. 1819/H, and OM./W-1239 of 15th instant addressed to the Secretary, Railway Board, *re* change in design of standard wagons.

No. OM. 1819/H.

15th July 1926.

The Secretary,
Railway Board,
Simla.

DEAR SIR,

Your letter No. 3420-S. of the 25th ultimo.

Change in the design of the Standard Wagons.

We beg to acknowledge your above letter in which you advise us of your decision to abandon I R C A designs for rolling stock wholly and immeditely. We greatly appreciate your offer to call for tenders for metre gauge stock to enable us to retain our labour but we point out that we are laid out primarily for the manufacture of broad gauge stock, and that our labour forces are not so versatile that they can, in a matter of months, change over from the manufacture of I R C A broad gauge to metre gauge stock and back again from I R C A metre gauge stock and to broad gauge stock of an entirely new design. Further, in the case of metre gauge stock output is hampered and restricted by the difficulty of obtaining in sufficient numbers, broad gauge vehicles of a type suitable for the transportation of the finished metre gauge wagons to their destination.

Whilst we have no desire to magnify the difficulties with which the industry is now faced, we submit that if the Railway Board do not maintain continuity in the construction of broad gauge stock during the period of transition from I R C A to I R S designs, the industry will receive a blow which orders for metre gauge stock will not avert.

The Railway Board would be rendering the wagon industry signal service if they could see their way clear to place with us orders for 400 broad gauge I R C A wagons, we trust that this solution to a difficult problem will commend itself favourably to the Board.

We would remind you that neither your letter No. 35-S. of the 8th July 1925, nor the public confirmation thereof by the Hon'ble Sir Charles Innes in the Assembly in February last, contained any hint or warning that a radical change in the designs of rolling stock was in the immediate contemplation of the Government of India.

We have carefully examined the I R S designs: until sample wagons are built it is not possible to say whether they have any latent defects from a manufacturing point of view (as was the case with the original I R C A designs), but new lists of materials and quantities will have to be prepared before we can tender for wagons or order materials when orders are placed; all our existing jigs and 80 per cent. of our dies are rendered obsolete and will have to be redesigned.

The period between the receipt of the detail drawings and the commencement of the manufacture of the I R S wagons is likely to be still further protracted by the fact that Home Manufacturers rarely keep to their promised deliveries of fittings. For example, we received your last order in December last, and we immediately cabled Home for fittings such as vacuum brake work and axle-boxes, etc., the Home Manufacturers promised to deliver the first

consignments by the 1st March this year, but the Consignments did not arrive until the middle of June. We fear that the alternation of the standard designs will mean still further delays as new patterns will have to be made in connection with the central buffing gear.

So extensive is the work to be done before manufacture of the I R S stock can be embarked upon, that if detail drawings and specifications will not be ready before October next, we are of the opinion that output will not be established before July 1927; we sincerely trust, therefore, that every effort will be made to accelerate the completion of the detail drawings and that you will furnish us copies at the earliest possible moment.

In conclusion we beg to state that we shall be very pleased to build the sample wagons upon a cost *plus* 10 per cent. profit basis.

In the above circumstances we do very seriously expect that the Board will give their sympathetic consideration to the suggestion of placing sufficient I R C A B. G. Wagons to enable us to keep our labour together and save us from financial loss.

Yours faithfully,
BURN AND COMPANY,
Managing Agents.

(5) *Letter from Messrs. Burn and Company, Limited, dated 24th July 1926.*

As requested we beg to submit herewith a statement computed from our tender for 53 94′ 6″ spans open type girders for North Western Railway submitted on 12th October last. We also enclose a letter received from the Chief Engineer, North Western Railway, showing the prices at which the order was placed at Home.

It will be seen how we have arrived at the Home Manufacturers fabrication cost which we calculate in this instance to be Rs. 68 per ton against the Rs. 72-8 per ton given in our former representations.

We may point out that this contract may be considered as a special case inasmuch as the cost of fabrication would be higher than the average plate girder span.

Enclosure No. 1.

53 SPANS OF 94′ 6″ FOR NORTH WESTERN RAILWAY.

Total weight of one girder 24 tons.

6 pieces of Boom averaging 2¼ tons each and 32 feet long, and the other 9 tons, in pieces about 10′ 6″ long, weighing 6 cwts. to ¼ ton each.

(If shipped rivetted up complete in 3 pieces, weight of each piece, 8 tons.)

	£	s.	d.
Home price c.i.f. Karachi 22·4 tons at £16-8-6 .	367	18	2
Less freight 13·4 tons at £3-10-0 . . . . } *Less* freight 9·0 tons at £2-0-0 . . . . }	64	18	0
F.o.b. Home Port .	303	0	2
C.i.f. price 225 cwt. of sections at £7-7-0 per ton	82	13	9
C.i.f. price 237 cwt. of plates at £8-2-0 per ton .	95	19	7
C.i.f. price 36 cwt. of rivets at £14-0-0 per ton .	25	4	0
Paint	12	0	0
	215	17	4
Freight 24·9 tons at £1-2-6	28	0	3
	187	17	1
Fabricated materials f.o.b. Home Port . .	303	0	2
Freight and materials	187	17	1
Cost of fabrication .	115	3	1

Cost of fabrication per ton $= \frac{£115\ 3\ 1}{22·4} = 5·15.$

Exchange 1—6 5/32=Rs. 68 per ton.

NOTE.—The weights of raw materials include 10 per cent. for wastage.

Enclosure No. 2.

(Copy.)

NORTH WESTERN RAILWAY.

Empress Road, Lahore,
Dated 4th February 1926.

No. 54-W./5.

FROM

THE CHIEF ENGINEER,

To

The Managing Agents,
Burn & Co., Ld., Howrah.

Tender for girders required for Jhelum Bridge.

DEAR SIRS,

With reference to the correspondence ending with your letter No. O. B. W./5533/H., dated the 13th January 1926, I beg to give below the rates at which the English tender for 53 girders required for strengthening the Jhelum Bridge on Lahore and Rawalpindi Section of the Railway were accepted :—

1. Girders at £16-8-6 per ton.
2. Troughing at £14-9-0 per ton. c.i.f.

Yours faithfully,

(Sd.)

for *Chief Engineer.*

(6) *Letter from the Indian Standard Wagon Company, Limited, and Burn and Company, Limited, dated 27th July 1926.*

WAGONS AND UNDERFRAMES.

We beg to forward herewith our replies to most of the questions raised at our oral examination on Wednesday. Replies to the remaining queries will be sent in due course as and when they are completed.

Question 1.

Please supply a comparison of Hukumchand's latest price with Continental price for solebar stiffener brackets given on page 298.

Answer.

Hukumchand price Rs. 3 each quoted 26th May 1926.
Belgian price Re. 1-3-9 each } Current.
British price Rs. 2-9-6 each }

Question 2.

When did you first start importing castings from the Continent?

Answer.

In December 1924.

Question 3.

How far would the price of the wagon be effected by the imposition of 25 per cent. on the castings?

Answer.

(*a*) The effect on an A-2 wagon price would be as follows:—

Castings for A-2 Type Wagons.

Article.	British.	Continental.
	Rs. A. P.	Rs. A. P.
Axle-boxes without bearings	129 7 11	85 7 10
Solebar stiffening brackets	10 7 0	5 15 1
Buffer cases and plungers	117 0 0	107 4 9
(Including 10 per cent.) . . .	256 14 11	198 11 8
(—) 1/11	23 5 9	18 1 1
	233 9 2	180 10 7
25 per cent.	58 6 4	45 2 8
With 25 per cent.	291 15 6	225 13 3
10 per cent.	256 14 11	198 11 8
,, Difference . .	35 0 7	27 1 7

(*b*) The effect on a C-2 wagon price would be as follows:—

Castings for C-2 Type Wagons.

Article.	British.	Continental.
	Rs. A. P.	Rs. A. P.
Axle-boxes without bearings	129 7 11	85 7 10
Solebar stiffening brackets	20 14 0	11 14 2
Buffer case and plungers	117 0 0	107 4 9
(Including 10 per cent.) . . .	267 5 11	204 10 9
(—) 1/11 . . .	24 4 11	18 9 8
	243 1 0	186 1 1
25 per cent.	60 12 3	46 8 3
With 25 per cent.	303 13 3	232 9 4
„ 10 per cent.	267 5 11	204 10 9
Difference .	36 7 4	27 14 7

Question 4.

What is total weight of forgings on an A-2 and C-2 wagons?

Answer.

(*a*) Weight of finished forgings for one A-2 type wagon.

Cwts.	Qrs.	Lbs.
59	2	0

(*b*) Weight of finished forgings for one C-2 type wagon.

Cwts.	Qrs.	Lbs.
39	1	0

Question 5.

Please give comparative prices Drawbar Hooks, Brake Beams and Screw Couplings in 1923 and 1925.

Answer.

(*a*) Drawbar Hooks (2 per wagon).

	1923. Sterling. £ s. d.	Ex. s. d.	Rs. A. P.	1925. Sterling. £ s. d.	Ex. s. d.	Rs. A. P.
C.i.f. price	1 9 2	1 6	38 13 8	2 9 6	1 6	33 0 0
Landing			0 4 0			0 4 6
Landed cost without duty per wagon set			39 1 8			33 4 6

(*b*) Brake Beams (2 per wagon).

	1923. Sterling. £ s. d.	Ex. s. d.	Rs. A. P.	1925. Sterling. £ s. d.	Ex. s. d.	Rs. A. P.
C.i.f. price	3 17 10½	1 6	51 14 8	2 12 3	1 6	34 13 4
Landing			0 8 10			0 7 9
Landed cost without duty per wagon set			52 7 6			35 5 1

(*c*) Screw Couplings.

	1924. Sterling. £ s. d.	Ex. s. d.	Rs. A. P.	1925. Sterling. £ s. d.	Ex. s. d.	Rs. A. P.
C.i.f. price	3 5 9	1 5 11/16	44 9 9	3 5 0	1 6	43 5 4
Landing			0 7 0			0 6 8
Landed cost without duty per wagon set			45 0 9			43 12 0

NOTE.—No price for 1923 is available.

Question 6.

Is the price of Rs. 2-9-6 landed, given on page 295 for solebar stiffening brackets the same as that given on page 297?

Answer.

Yes the prices are the same, and represents the landed price of British brackets.

Question 7.

What is the price you have obtained for orders for wagons and underframes?

Answer.

We attach a statement (Enclosures Nos. 1 and 2) showing the average price per wagon and underframe for orders received by Burn & Co., Ld. and Indian Standard Wagon Co., Ld.

Question 8.

Please give copy of letter from the Government of India *re* their policy in regard to State Workshops.

Answer.

We attach herewith copy of letter No. 1597-S., dated 11th August from Simla (enclosure No. 3).

Question 9.

Please give copy of letter cancelling the call for 575 underframes.

Answer.

We attach copy of letter No. 119-S. of 13th January 1925 from Delhi (enclosure No. 4).

Question 10.

UNDERFRAMES.

A statement setting forth our revised claim *re* underframes will follow.

Question 11.

Please give comparison of British and Continental prices of imported wagon parts.

Answer.

We attach herewith statements showing (*a*) percentage of difference per item, and (*b*) difference per wagon set (enclosures Nos. 5 and 6).

Enclosure No. 1.

List of wagon orders and average price each.

		Average for Order.
230	C-2 type wagons (E. I. R.) at Rs. 4,309-12	3,942-8-9·6
1,020	C-2 type wagons (E. I. R.) at Rs. 3,859-12	
1,250		
320	C-2 type wagons (E. I. R.) at Rs. 3,674	3,695-14-1
75	C-2 type wagons (M. S. M.) at Rs. 3,800	
30	C-2 type wagons (S. I. R.) at Rs. 3,669	
425		
845	C-2 type wagons (E. I. R.) at Rs. 3,010-4	3,029
112	C-2 type wagons (N. W. R.) at Rs. 3,138-12	
429	C-2 type wagons (G. I. P.) at Rs. 3,037-10	
40	C-2 type wagons (S. I. R.) at Rs. 3,015	
1,426		
324	C-3 type wagons (N. W. R.) at Rs. 3,318-12	3,318-12

Enclosure No. 2.

Analysis of orders for Carriage, Underframes and Bogies and Wagons received by Burn & Co., Ld.

		Average rate each.
1920-21.		
107 Underframes and 214 Bogies	B. G.	*16,334*
30 Underframes and 60 Bogies	M. G.	*12,331*
150 M. A-2 Wagons	M. G.	*4,824*
450 A-2 Type Wagons	B. G.	*9,620*
40 C-3 Type Wagons	B. G.	*7,362*
300 A-1 Type Wagons	B. G.	6,880
1921-22.		
7 Underframes and 14 Bogies	B. G.	15,730
1922-23.		
67 A-1 Type Wagons	B. G.	4,555
33 Underframes and 66 Bogies	B. G.	11,354
10 Underframes and 20 Bogies	M. G.	8,845
33 Bogies L. S. O. Wagons	B. G.	11,700
1923-24.		
106. Underframes and 212 Bogies	B. G.	11,399
1924-25.		
195 C-2 Type Wagons	B. G.	3,703
550 A-2 Type Wagons	B. G.	4,192
1925-26.		
26 Underframes only	B. G.	660
137 Underframes and 274 Bogies	B. G.	9,200

Enclosure No. 3.

No. 1597-S., dated Simla, the 11th August 1923.

From—The Assistant Secretary, Government of India, Railway Department (Railway Board),

To—The Secretary, Indian Engineering Association.

In reply to your letter No. 65-I. E., dated the 30th May 1923, I am directed to inform your Association that it is the policy of Government to restrict railway workshops to their primary function of dealing with the repairs and maintenance of the stock and equipment of the railway as far as this can be done with observance of economy in the working of the shops. To some extent it is desirable to undertake work that is not purely repair or maintenance work in order to make the best use of machines and staff that could not otherwise be given continuous full time employment. But it is the policy of Government to keep the amount of such work to a minimum and particularly where it can be done by private firms.

Instructions to the above effect have been issued to all railways and proposals for extensions of workshops or workshop equipment are carefully scrutinized to see that they are carried out.

The large expenditure on workshops to which you refer is due not only to the very heavy repair work outstanding and to the necessity for making provision for repairs to the ever-increasing numbers of vehicles, but also to the fact that the workshop equipment itself which could not be renewed

during the war period, is in many cases worn out and obsolete and has to be replaced with new equipment of modern design and at modern prices.

Enclosure No. 4.

COPY.

GOVERNMENT OF INDIA.

RAILWAY DEPARTMENT.

(RAILWAY BOARD).

No. 119-S.

Dated Delhi, the 13th of Januray 1925.

To

MESSRS. BURN & Co.,
Howrah.

DEAR SIRS,

With this office letter No. 38-S., dated the 17th December 1924, you were supplied with forms to enable you to submit tenders for the construction and supply of broad gauge coaching underframes with bogies to I. R. C. A. standard designs, that were required by Railway Administrations during 1925-26. I am now to inform you that you should treat as cancelled the Railway Board's notice of invitation to tender for the 575 coaching underframes in question. I am to say that it is with reluctance that the Railway Board have been obliged to cancel this call, as certain serious defects in the designs of these underframes have been recently brought to notice by the Carriage and Wagon Standards Committee. Arrangements will be made, however, for one of the broad gauge railways to call for tenders in India at a later date for underframes of existing approved designs up to the estimated capacity of such workshops in India as are capable of undertaking work of this description.

Yours faithfully,

Sd.-

for Secretary, Railway Board.

Enclosure No. 5.

Comparisons of prices of imported articles for I. R. C. A. wagons.

Articles.	British.	Continental.	Differences.	Percentage.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Axle-boxes (sets) . .	216 4 6	166 15 3	49 5 9	23·
,, . castings (sets) .	117 13 1	75 13 0	42 0 1	35·7
Spring steel (ton) .	213 0 7	161 10 7	51 6 0	24·
Laminated bearing springs	180 8 5	109 15 2	70 9 3	39·
Door arrester springs .	4 13 3	3 11 11	1 1 4	22·
Buffers (complete) . .	246 15 11	228 10 3	18 5 8	7·5

Enclosure No. 6.

Comparative prices for A-2 Type Wagons.

Article.	British.			Continental.			Difference.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Axle-boxes (complete) . .	216	4	6	166	15	3	49	5	9
Laminated bearing springs .	180	8	5	109	15	2	70	9	3
Buffers (complete) . . .	246	15	11	228	10	3	18	5	8
Solebar stiffening brackets . .	9	8	0	4	6	7	5	1	5
Total Difference .	...			...			143	6	1

(7) *Letter from Messrs. Burn and Company, Limited, dated the 6th August 1926.*

STEEL INDUSTRY ENQUIRY

We beg to send herewith the remaining answers to the questions raised during our oral examination.

BURN AND COMPANY, LIMITED.

INDIAN STANDARD WAGON COMPANY, LIMITED.

(1) *Protection required for the Wagon Industry.*

1. In estimating the measure of protection necessary for the Wagon Industry we have perforce had to assume in our calculations that the protection granted to the Steel Industry would remain unchanged. We have also been obliged to omit any estimate of the effect of a possible increase in the duty on steel castings.

Therefore if the tariff on steel and on steel castings be increased, a corresponding increase should be made, by way of compensation, in the degree of protection now claimed.

2. We submit that the duty on wagons of all types should be increased to 27½ per cent. if vacuum brake gear be included in the assessment of duty. Of this duty only 12½ per cent. in the case of A-1 and A-2 wagons, and 11½ per cent. in the case of C-2 and C-3 wagons, represents substantive protection, the balance being merely compensatory.

3. We feel, however, that the Board will be reluctant to increase the duty on the vacuum brake gear which is not manufactured in this country as yet. If the vacuum brake gear (which costs approximately Rs. 240 including 10 per cent. duty), be excluded in the assessment of the new duty, then we claim that the existing duty on wagons should be increased to 30 per cent. In effect this affords the industry protection to the extent of 13½ per cent. on the " A " type wagons and 12 per cent. on the " C " type wagons.

4. We suggest that the duty should be on an *ad valorem* basis to obviate the anomaly that would ensue were wagons protected by a specific duty and wagon parts by an *ad valorem* duty. Further, an *ad valorem* duty has the effect of affording the " A " type wagons relatively more protection than the " C " type; we are of the opinion that " A " type wagons are in need of a greater measure of protection because the Home manufacturers tend to quote a relatively lower price for the " A " than for the " C " type stock. A specific duty based on the mean between the 30 per cent. *ad valorem* duty on an A-2 and C-2 type wagon, would have the effect of over protecting the " C " type stock and under protecting the " A " type stock.

Schedule shewing the effect of the duties proposed on wagons.

Type.	C.i.f. costs of imported wagon.		C.i.f. cost of vacuum brake.	Comparison of proposed duties.		
				Details.	27½ % *ad valorem.*	30% *ad val. rem and* 10 % on vacuum brake.
		Rs.	Rs.		Rs.	Rs.
A-1	Indian price . .	3,485	240	Duty on c.i.f. price . . .	682	678 + 22 = 700
	Less—			*Less*—		
	Bounty . 402					
	Erection . . 325			Present duty . . 248		
	Landing . 31					
		758		Compensation for increased duty on steel . . 120		
		2,727				
	Less duty 1/11th .	248	22		368 = 14·8%	368 = 14·8%
	C.i.f. cost . . .	2,479	218	Measure of protection . .	314 = 12·7%	332 = 13·4%
	C.i.f. cost (excluding vacuum brake) .	2,261				
A-2	Indian price . .	3,470	240	Duty on c.i.f. price . . .	709	708 + 22 = 730
	Less—			*Less*—		
	Bounty . 276					
	Erection . 325			Present duty . . . 258		
	Landing 31					
		632		Compensation for increased duty on steel . . 120	378 = 14·7%	378 = 14·7%
		2,838				
	Less duty 1/11th .	258	22			
	C.i.f. cost . . .	2,580	218	Measure of protection . .	331 = 12·8%	352 = 13·6%
	C.i.f. cost (excluding vacuum brake) .	2,362				

Schedule shewing the effect of the duties proposed on wagons—concld.

Type.	C.i.f. costs of imported wagon.		C.i.f. cost of vacuum brake.	Comparison of proposed duties.		
				Details.	27½ % *ad valorem.*	30 % *ad valorem* and 10 % on vacuum brake.
		Rs.	Rs.		Rs.	Rs.
C-2	Indian price . .	3,110	240	Duty on c.i.f. price . . .	666	662 + 22 = 684
	Less—			*Less*—		
	Bounty . 113					
	Erection . 300			Present duty . . 242		
	Landing . 31					
	444			Compensation for increased duty on steel . . 143		
		2,666				
	Less duty 1/11th .	242	22		385 = 15·9%	385 = 15·9%
	C.i.f cost . . .	2,424	218			
				Measure of protection . .	281 = 11·6%	298 = 12·3%
	C.i.f. cost (excluding vacuum brake) .	2,200				
C-3	Indian price . .	3,250	240	Duty on c.i.f. price . . .	646	639 + 22 = 661
	Less—					
	Bounty . 335					
	Erection . 300			*Less*—		
	Landing . 31					
	666			Present duty . . . 235		
		2,584				
	Less duty 1/11th .	235	22	Compensaton for increased duty on steel . . 143	378 = 16·1%	378 = 16·1%
	C.i.f. cost . . .	2,349	218			
	C.i.f. cost (excluding vacuum brake) .	2,131		Measure of protection . .	268 = 11·4%	283 = 12·1%

(2) *The comparison between the unit "costs above materials" of The Indian Standard Wagon Company, Limited, and those of Burn and Company, Limited* (1925-26).

As requested we have furnished a tentative comparison of the above.

The value of this direct comparison is vitiated by the following circumstances:—

(1) The Indian Standard Wagon Company, Limited, have so far concentrated on the manufacture of open goods wagons whilst Burn & Company, Limited, have chiefly built covered goods wagons, together with carriage underframes.

(2) To render possible any comparison whatever, we have had to convert into terms of wagons, the underframes built during the same period; we have employed the empirical ratio of three wagons to one underframe.

(3) During the period under review Burn & Company, Limited's plant was not employed to the full extent of its economic capacity and for about two and a half months of the period the plant was practically unemployed.

(4) The plant of the Indian Standard Wagon Company, Limited, had been closed down for some time when the Company received the order for 1,250 wagons and later the order for 425 wagons. To avert any possibility of delay in the completion of the order, and to give the plant an opportunity to get into full swing, numbers of forgings were imported from Home, and Burn & Company, Limited, also assisted by making for the Indian Standard Wagon Company, Limited, certain forgings, pins and C. I. Brake Blocks, Cylinder Carriers, Name Plates, which items are included in the material costs of the Indian Standard Wagon Company, Limited, whilst similar costs are allocated between material and "cost above material" in the case of Burn & Company, Limited.

The wages and charges representing such items we estimate to be approximately Rs. 150.

(5) The Indian Standard Wagon Company, Limited, enjoy the advantage of cheaper power and fuel owing to its geographical situation.

(6) Until recently certain equipment of the Indian Standard Wagon Company, Limited (such as multiple drills) was superior to that possessed by the Howrah Works, and made for economy of labour cost.

To make compensating adjustment in the statistics for all these various factors would be a task of great complexity and doubtful possibility.

Cost above materials (average per wagon).

Description.	The Indian Standard Wagon Co., Ld.					Burn & Co., Ld.		
						661 Wagons.		
	230 Wagons 1924-25.	1,020 Wagons 1925-26.	Total 1,250 Wagons.	425 Wagons 1925-26.	Total 1,675 Wagons.	Total.	C. W. Charges.	Proportion of General (30%).
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Direct labour	297	297	297	337	307	378	378	..
Power	115	49	61	55	59	225	224	1
Fuel	106	38	51	43	49	127	125	2
Repairs	359	85	136	97	126	105	105	..
Non-productive labour . .	141	54	70	63	69	195	123	72
General shop supplies . . .	170	66	85	74	82	158	158	..
Supervision—								
Europeans	243	81	110	91	106	137	111	26
Anglo-Indians and Indians .	174	61	82	68	78	143	82	61
Sundry expenses . . .	152	30	53	35	48	193	16	177
Total .	1,759	761	945	863	924	1,661	1,322	339

Cost above materials (average per wagon)—concld.

Description	The Indian Standard Wagon Co., Ld.					Burn & Co., Ld.		
						661 Wagons.		
	230 Wagons 1924-25.	1,020 Wagons 1925-26.	Total 1,250 Wagons.	425 Wagons 1925-26.	Total 1,675 Wagons.	Total.	C. W. Charges.	Proportion of General (30%).
OVERHEAD CHARGES.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		
Depreciation—								
Buildings	152	35	57	40	52	14		
Machinery	622	143	231	162	214	95		
Other Plant	103	24	38	27	35	5		
TOTAL DEPRECIATION .	877	202	326	229	301	114		
Head Office Charges—								
Managing Agency fees . .	157	48	68	54	65	34		
Calcutta Office expenses .	72	16	27	19	25	70		
London Office expenses . .	56	8	4	9	1	..		
TOTAL HEAD OFFICE CHARGES .	173	72	91	82	89	104		
TOTAL OVERHEAD CHARGES .	1,050	274	417	311	390	218		
TOTAL COST ABOVE MATERIALS .	2,809	1,035	1,362	1,174	1,314	1,879		
Less for Work-in-Progress Carried forward.	..	..	..	..	80	321		
					1,234	1,558		

Cost above materials per vehicle.

Description.	Year 1922-23.			Year 1925-26.		
	For 497 Wagons.	For 76 Underframes.	For Equivalent No. of Wagon *i.e.*, 724 Wagons.	For 418 Wagons.	For 81 Underframes Normal.	For Equivalent No. of Wagon *i.e.*, 661 Wagons.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Direct labour	581	1,617	568·5	374	1,153	378
Power	350	982	343·5	223	686·5	225
Fuel	227·5	637·5	223	125	385·5	127
Repairs—						
Buildings	4	11·5	4	9	28	9
Machinery	113	317	111	86·5	266·5	87
Electric	8·5	24	8	9	27	9
General Work	194	543	190	156	481	158
Non-productive wages	229·5	643	225	193	594·5	195
Other orders	0·5	2	0·5	..	1	0·25

Cost above materials per vehicle—concld.

Description.	Year 1922-23.			Year 1925-26.		
	For 497 Wagons.	For 76 Underframes.	For Equivalent No. of Wagon *i.e.*, 724 Wagons.	For 418 Wagons.	For 81 Underframes Normal.	For Equivalent No. of Wagon *i.e.*, 661 Wagons.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Supervision—						
Europeans	164·5	461	161·5	136	418	137
Anglo-Indians and Indians	162	455	159	142	436	143
Sundry works charges (as per Schedule 1-A) .	162	455	159·2	165	509	167
Jigs, Dies and Tools	69·5	182	66·5	34	43	26
Despatching charges	1	33	4	..	1·5	0·25
Total .	2,267	6,363	2,224·5	1,652·5	5,030·5	1,661·5

(3) *Wagons.*

We attach a statement in response to your enquiry, shewing to what extent "the cost above materials" would be reduced by an expansion of output to 2,500 wagons per annum and to 3,000 wagons respectively.

Estimate of cost of 2,000 wagons per annum.

(With the maximum possible amount of work done in India.)

—	Cost of 1,020 Wagons.	Cost of 425 Wagons.	Difference due to making more parts.	Further probable increase due to same cause.	TOTAL.	Additional Staff Required.	Anticipated Cost in 1927-28 for 2,000 Wagons.
	Per Wagon. Rs.	Per Wagon. Rs.	Per Wagon. Rs.	Per Wagon. Rs.	Per Wagon. Rs.	Per Wagon. Rs.	Per Wagon. Rs.
Direct Labour	297	337	40	17	354	..	354
Power	49	55	6	9	64	..	64
Fuel	38	43	5	6	49	..	49
TOTAL .	384	435	51	32	467	..	467
Repairs	85	97	12	8	107	..	107
Non-Productive Labour . .	54	63	9	7	70	..	70
General Shop Supplies . .	66	74	8	6	80	..	80
Supervision—							
European	81	91	10	..	91	1 Foreman @ Rs. 8,400 =4	95

Estimate of cost of 2,000 wagons per annum—concld.

(With the maximum possible amount of work done in India)—*concld.*

	Cost of 1,020 Wagons.	Cost of 425 Wagons.	Difference due to making more parts.	Further probable increase due to same cause.	Total.	Additional Staff Required.	Anticipated Cost in 1927-28 for 2,000 Wagons.
	Per Wagon.	Per Wagon.	Per Wagon.	Per Wagon.	Per Wagon.	Per Wagon.	Per Wagon.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Indian	61	68	7	2	70	Various @ Rs. 6,000 =3.	73
Sundries	30	35	5	3	38	..	38
TOTAL .	377	428	51	25	456	..	463
Overhead—							
Depreciation . . .	202	..	..	..	..	..	151
Head Office and Managing Agency Charges.	72	..	..	..	..	..	48
Interest	56	..	..	..	..	..	56
TOTAL .	330	..	..	..	..	..	255
GRAND TOTAL .	1,091	..	..	..	..	..	1,185

Comparative costs of varying outputs.

	2,000 Wagons.		2,500 Wagons.		3,000 Wagons.	
	Total.	Per Unit.	Total.	Per Unit.	Total.	Per Unit.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Direct Labour	7,08,000	354	8,85,000	354	10,62,000	354
Power	1,28,000	64	1,60,000	64	1,92,000	64
Fuel	98,000	49	1,22,500	49	1,47,000	49
Total	9,34,000	467	11,67,500	467	14,01,000	467
Repairs	2,14,000	107	2,35,400	94·2	2,46,100	82·0
Non-Productive Labour	1,40,000	70	1,61,000	64·4	1,75,000	58·3
General Shop Supplies	1,60,000	80	1,92,000	76·8	2,08,000	69·3
Supervision—						
European	1,90,000	95	1,90,000	76·0	1,95,000	65·0
Anglo-Indian and Indian	1,46,000	73	1,51,000	60·4	1,56,000	52·0
Sundries	76,000	38	83,600	33·4	87,400	29·1
Total	9,26,000	463	10,13,000	405·2	10,67,500	355·8

Comparative costs of varying outputs—concld.

	2,000 Wagons.		2,500 Wagons.		3,000 Wagons.	
	Total	Per Unit.	Total.	Per Unit.	Total.	Per Unit.
Overhe d—	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Depreciation	3,02,000	151	3,02,000	120·8	3,02,000	100·7
Head Office and Managing Agency Charges .	96,000	48	96,000	38·4	96,000	32·0
Interest	1,12,000	56	1,12,000	44·8	1,12,000	37·3
Total .	5,10,000	255	5,10,000	204·0	5,10,000	170·0
GRAND TOTAL .	23,70,000	1,185	26,90,500	1,076·2	29,78,500	992·8

		Additions to total expenses for various outputs.				
	Repairs.	Non-Productive Labour.	General Shop Supplies.	Supervision, European.	Supervision, Indian.	Sundries.
	Per cent.	Per cent.	Per cent.	Rs.	Rs.	Per cent.
For 2,500 Wagons	10	15	20	*Nil.*	5,000	10
For 3,000 Wagons	15	25	30	7,000	10,000	15

(5) *Question 10.*

CORRIGENDA.

Underframes.

Page 237 of the 1926 printed evidence.....please *cancel* the paragraph commencing with the words " We have had no reason, during the past year,....." and closing with the words " .....protection previously granted " and *substitute* the following:—

The table annexed shews the estimated cost of some G. I. P. underframes which was the last order for which we tendered, and also a comparison between the estimated cost of 150 E. I. R. underframes for which we tendered in 1925 and the price at which the order was placed at Home as per page 385 of the 1925 printed evidence.

We know the Home price of the 150 E. I. R. underframes but not the Home price of those for the G. I. P. We have been obliged therefore to base our claim for protection on a comparison between the Home price of the E. I. R. underframes and our cost for the same.

We submit that a specific duty of Rs. 1,600 per underframe should be substituted for the present duty and the bounty of Rs. 600 per underframe.

	Rs.
Present duty	813
Difference between Home and Indian price on E. I. R. frames	810
	1,623

Inadequate protection defeats its own object and we respectfully beg to state that we consider inadequate the measure of protection previously granted.

(6) *Estimate of the annual demand for Broad Gauge coaching underframes.*

If the Board will refer to page 10, Volume II of the Railway Administration Report for 1924-25 they will see that the stock of Broad Gauge Coaching Vehicles as at 31st March 1924 was no less than 10,000; assuming for such vehicles an average life of 20 years it becomes evident that it is highly probable that 500 underframes are required yearly in replacement. The Report also gives the figure of 366 as being the net additions to Broad Gauge Coaching stock making the total annual requirements 866 Broad Gauge underframes.

Similarly, the stock of Metre Gauge Coaching stock was 7,577, necessitating an annual replacement of about 378 Metre Gauge underframes per year.

It will be seen therefore that the demand in India for carriage underframes is sufficient to justify the protection and encouragement of this industry.

Cost of Underframes.

G. I. P. Railway Underframes (1926).

	Rs.	A.	P.
Material (subject to protective duties)	1,653	15	8
Duty	513	4	2
Other material	3,632	6	1
Duty	381	15	5
Landing and railway freight	84	12	5
	6,266	5	9
Fabrication	3,818	0	0
	10,084	5	9
Profit 8 per cent.	806	12	0
TOTAL	10,891	1	9

E. I. RAILWAY UNDERFRAMES (1925).

Indian cost.

	Rs.	A.	P.
Material (subject to protection)	1,743	0	0
Duty	481	0	0
Other material	3,122	0	0
Duty	294	0	0
Landing freight, etc.	85	0	0
	5,725	0	0
Fabrication	3,693	0	0
	9,418	0	0
Profit 8 per cent.	753	7	1
TOTAL	10,171	7	1

British cost.

	Rs.	A.	P.
Exchange 1*s.* 6*d.*			
Underframe (c.i.f. Calcutta £610·3)	8,137	5	4
Duty 10 per cent.	813	11	8
Landing, etc.	45	0	0
Erection	365	0	0
TOTAL	9,361	1	0

Difference in favour of British Manufacturer Rs. 810-6-1

(7) *Fabricated steel.*

In connection with our claim for the protection of fabricated steel we beg to call your attention to pages 78 and 79 of the " Sea Borne Trade of India " for June 1926.

As compared with the imports of the three months April to June 1925, the imports of protected fabricated steel during the corresponding three months of 1926, show an increase of 40 per cent. Not only do the figures exhibit an absolute increase, they also show that there is a definite tendency for imports of protected fabricated steel to increase thus proving that the measure of protection originally granted, is declining.

IMPORTS OF PROTECTED FABRICATED STEEL.

April to June.

	Tons.	Value. Rs.
1925	4,335	8,07,575
1926	5,952	13,31,606

Complementary to the foregoing is the annexed statement of orders for fabricated steel received in 1923, 1924, 1925 and the first quarter of 1926.

Year.	Tonnage.
1923	4,400
1924	8,500
1925	4,900
1926 (1st quarter)	1,000

Finally the actual example (see our letter OBW of the 24th July 1926) of the price at which fabricated steel can be imported into India crowns the evidence that the industry is not receiving the protection intended by the Legislature.

Summary of orders for structural and bridge work from January 1923 to March 1926.

Continuation of statement appearing on page 240 of the printed evidence *re* supplementary protection.

Period.	Total.		Analysis											
			Railways.		*Government.*		*Indian Stores Department.*		*Municipalities.*		*Indian States.*		*Commercial.*	
	Value.	Weight.	Value.	Weight.	Value.	Weight.	Value.	Weight.	Value.	Weight.	Value	Weight.	Value.	Weight.
	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.
Year 1923 . .	14,21,241	4,366	7,07,017	2,166	1,44,787	459	42,580	135	54,251	167	12,574	41	4,60,032	1,308
Year 1924 . .	26,51,199	8,480	13,44,297	4,341	1,07,353	349	6,60,003	2,081	2,17,115	680	87,343	274	2,35,088	755
Year 1925.														
1st Quarter . .	7,43,352	2,461	5,97,502	1,978	44,728	148	4,078	14	8,688	29	..	..	88,356	292
2nd ,, . .	2,20,707	746	1,04,469	353	6,930	24	..	..	..	..	..	..	1,09,308	369
3rd ,, . .	2,51,540	622½	2,26,880	556½	9,505	26½	..	..	..	..	..	..	15,155	39½
4th ,, . .	3,38,726	1,052	2,46,605	782½	20,090	54½	43,608	125	7,500	22½	..	..	20,923	68
Total .	15,54,325	4,881½	11,75,456	3,669½	81,253	253	47,686	139	16,188	51½	..	..	2,33,742	768½
Year 1926.														
1st Quarter .	3,01,977	1,000½	1,45,913	474	71,850	246½	..	..	47,634	164	9,470	24½	27,110	90½

(8) *Letter No. 653, dated 18th August 1926, from Secretary, Tariff Board, to Messrs. Burn and Company, Limited, Howrah.*

I am directed to ask if you will kindly furnish the Tariff Board with figures showing your total output (in tons) of fabricated steel work for the periods:—

1st April 1924 to 31st March 1925.
1st April 1925 to 31st March 1926.

I am to say that the Board would be obliged if these figures could be supplied as soon as possible.

---

(9) *Letter No. 675, dated the 23rd August 1926, from the Secretary, Tariff Board, Calcutta, to Messrs. Burn and Company, Limited, Howrah.*

— Messrs. Jessop and Company have supplied the Tariff Board with a list of the orders they have received for fabricated steel work from 1st March 1924 to the end of July 1926 in a form which shows:—

Order No.	Date.	Constituents.	Particulars of work.	Total tonnage.	Rate per cwt.

I am directed to say that the Board would be obliged if you would kindly supply a similar list as soon as possible.

(10) *Letter from Messrs. Burn and Company, Limited, dated 3rd September 1926.*

We have pleasure in forwarding herewith the statements called for in your letters No. 653 of 18th ultimo and No. 675 of 23rd ultimo.

It will be clearly seen from the table of outputs that although the total output for 1925-26 exceeded that of 1924-25, the amount of work in hand during 1925-26 was steadily decreasing as the volume of orders for work fell off.

	1924-25	1925-26.
1st April—		
Work in hand	2,805	6,224
1924-25—		
Orders received	9,475	3,421
TOTAL	12,278	9,645
1924-25—		
Output	6,054	7,851
31st March—		
Work in hand	6,224	1,794
1926-27, 1st Quarter—		
Work in hand, Brought forward		1,794
Orders received		848
TOTAL		2,642
Output		879
Work in hand, Carried forward		1,763

We have omitted from our statistics the order received from the East Indian Railway for the strengthening material for the Sone Bridge as the materials are only semi-fabricated and a large amount of the drilling and rivetting will be done at site. The order is therefore not representative.

The table also exhibits the capacity of this industry to expand in response to the stimulus of protection—during the short period under review, production expanded by 33⅓ per cent. But this added productive power will be wasted unless the industry is sheltered until the economies of increasing output enable us to exist in open competition with foreign competitors. You will see that in the first quarter of 1925-26 we were able to work to only 50 per cent. of last year's output and the volume of work in hand represents but three months' production.

We enclose a graph* illustrating the figures.

* Not printed.

Enclosure No. 1.

Fabricated Steel.

Statement shewing Orders received Output and Orders in hand.

Period.	Opening Tonnage of Orders in hand.	Orders Received Tons.	Total.	Output Tons.	Closing tonnage of Orders in hand.
1924-25.					
1st Quarter	2,803	2,369	5,172	827	4,345
2nd Do	4,345	2,349	6,694	1,468	5,226
3rd Do.	5,226	2,296	7,522	1,992	5,530
4th Do.	5,530	2,461	7,991	1,767	6,224
Year 1924-25	2,803	9,475	12,278	6,054	6,224
1925-26.					
1st Quarter	6,224	746	6,970	2,165	4,805
2nd Do.	4,805	623	5,428	1,961	3,467
3rd Do.	3,467	1,052	4,519	1,790	2,729
4th Do	2,729	1,000	3,729	1,935	1,794
Year 1925-26	6,224	3,421	9,645	7,851	1,794
1926-27.					
1st Quarter	1,794	848	2,642	879	1,763

Enclosure No. 2.

List of Orders for Structural Steelwork received by Burn and Company, Limited.

Date.	Constituents.	Particulars of Orders.	Tons.	Rate per Cwt. to nearest Annas.	Value.	Remarks.
				Rs. As.	Rs.	
1st Mar. 1924 .	Begg Sutherland & Co., Cawnpore.	Roof Materials for Sugar Godown (including corr. sheeting) 50′ × 140′.	15	18 13	5,650	
5th Mar. 1924 .	Dalhousie Jute Mills	Jute Godown	52	11 5	11,761	
12th Mar. 1924 .	District Board Engineer, Chittoor.	11 Spans of 50′ Clear Roadway for Swarnamukhi Bridge.	165	17 7	57,500	
14th Mar. 1924 .	B. N. Railway . . .	3 Spans of 40′ Girders .	38¼	14 2	10,935	
Ditto .	Ditto . . .	2 „ of 20′ „ . . .	8½	13 8	2,300	
19th Mar. 1924 .	Secretary, Store Purchase Committee, Mysore Govt.	1—40′ Clear Span Girders .	8½	15 0	2,552	
		2—20′ ditto .	5	12 13	1,281	
24th Mar. 1924 .	B. & N.-W. Railway . .	Materials for Sonepur 3rd Class Waiting Shed.	11	13 8	2,970	
28th Mar. 1924 .	O. & R. Railway . .	Strengthening 11—200 ft. spans of Garmukteswar Bridge.	257½	13 8	69,575	
27th Mar. 1924 .	Methodist Church School, Rangoon.	Stanchions Girders & Cross Girders.	31	13 14	8,618	
2nd Apl. 1924 .	B. N. Railway . . .	2 Spans of 40′ Girders . .	24½	14 14	7,290	

Date.	Constituents.	Particulars of Orders.	Tons.	Rate per Cwt. to nearest Annas.		Value.	Remarks.
				Rs.	As.	Rs.	
9th Apl. 1924 .	Burma Railways .	Screens & Sunshed for Workshops	16¼	19	13	6,438	C. I. F. Rangoon.
28th Apl. 1924 .	Orissa Feudatory State, Sambalpur.	Screw Pile Bridge . .	218	11	4	49,075	
29th Apl. 1924 .	Burma Railways . .	1—30′ Skew Span Girder . .	7¾	14	13	2,300	
6th May 1924 .	New Market, Rangoon .	Columns, Architraves, Floor Beams, etc.	605	14	12	1,78,300	
21st May 1924 .	B. N. Railway . . .	16 Spans of 40′ Girders . .	205½	14	3	58,320	
12th May 1924 .	I. I. & S. Co., Ltd. . .	Steel Frame Building . .	98½	17	5	33,995	
28th May 1924 .	Indian Stores Deptt. . .	Materials for Mobilisation Shedding.	884½	23	3	4,09,770	F. O. R. Lahore & Quetta.
6th June 1924 .	A. B. Railway . . .	Trough Plates & Cross Sleeper Truck Girders.	87½	15	3	26,519	
17th June 1924 .	Bikaner State Railway .	2—10′ Span Girder Bridges .	16½	13	14	4,575	
24th June 1924 .	Burma Railways . .	10—12′ Clear Span Girder .	16	15	2	4,840	C. I. F. Rangoon.
Ditto .	Ditto . . .	16—20′ ditto . .	58¾	15	5	18,000	Ditto.
Ditto .	Ditto . . .	7—40′ ditto . .	81½	17	8	28,518	Ditto.
10th June 1924 .	Mysore Iron Works . .	Steel Trusses and Columns, etc. .	11	15	7	3,400	
Ditto .	Port Commissioners, Rangoon	80′ Gangway to Pontoon . .	14½	17	14	5,192	C. I. F. Rangoon.

14th June 1924 .	Pegu Pagoda, Burma .	Materials for the Extension "B" to Pegu Pagoda.	8½	22 14	38,558	Ditto.
27th June 1924 .	Md. Smail Tsetang Thupton Kunkhen, Kalimpong.	150 r.ft. steel troughing 18" wide × 12' deep.	5	20 0	2,000	
3rd July 1924 .	Burma Railways . .	Steelwork in the Kamendine Subway.	145	14 4	41,300	
7th July 1924 .	O. and R. Railway . .	4 straight and 2 Skew 50' clear Trough Girder Spans.	221½	14 10	64,796	
10th July 1924 .	Ditto . . .	49—15 ft. Clear Girder spans .	137¾	13 13	38,122	
Ditto .	Ditto . . .	23—20 ft. ditto .	104¾	13 12	28,819	
22nd July 1924 .	Burma Railways . .	90 spans 10 ft. clear Girders .	114½	13 13	31,590	
Ditto .	Ditto . . .	25 „ 14 ft. ditto .	54½	13 6	14,525	
Ditto .	Ditto . . .	19 „ 20 ft. ditto .	70	14 12	20,615	C. I. F. Rangoon.
25th July 1924 .	B. N. Railway . . .	1—40' B. G. span Girder .	12¼	14 13	3,637	
7th July 1924 .	N. W. Railway . . .	6—9' dia. Water Columns Relay Tanks.	30½	17 11	10,785	
10th July 1924 .	Burn & Co., Calcutta .	16 Trusses	14½	16 14	4,894	
15th July 1924 .	Executive Engineer, Lakhimpur Division.	Trusses, Columns, etc. . .	21¾	11 10	5,048	
19th July 1924 .	Ludlo Jute Co. . . .	Steelwork for Press House . .	14¾	13 6	3,950	
22nd July 1924 .	S. I. Railway . . .	2 sets of Tanks and Stagings	25	16 6	8,180	
1st Aug. 1924 .	Indian Stores Department .	4 Spans of 30 ft. Girders . .	914½	15 3	2,77,624	
13th Aug. 1924 .	Burma Railways . .	2 „ 20 ft. „ . .	7¼	15 9	2,256	C. I. F. Rangoon.

Date.	Constituents.	Particulars of Orders.	Tons.	Rate per Cwt. to nearest Annas.	Value.	Remarks.
				Rs. As.	Rs.	
19th Aug. 1924 .	B. N. Railway . . .	10 Spans 40′ B. G. Girders .	134½	16 6	44,060	
29th Aug. 1924 .	Ditto . . .	1 B. G. Span 60 ft. Girder .	27	16 3	8,730	
4th Aug. 1924 .	J. B. Railway . . .	1—20,000 Gall. Tank . .	19	16 13	6,400	
Ditto .	E. I. Railway . . .	Roofs, Columns, Architraves, etc.	62¾	17 2	21,505	
8th Sept. 1924 .	Duncan Bros. & Co., Ltd. .	20 Iron Cooly Houses 16′ × 12′ .	9½	16 5	3,100	
19th Sept. 1924 .	Dist. Engineer, Hazaribagh .	3 Spans of 40 ft. Girders . .	34¾	15 4	10,600	
25th Sept. 1924 .	Duncan Bros. & Co. . .	25 Cooly Houses 16′ × 12′ .	11½	16 14	3,875	
4th Oct. 1924 .	E. I. Railway . . .	38 Spans of M. S., Plate Girders of 28′ 8″.	319½	15 4	97,584	
15th Oct. 1924 .	Ditto . . .	71 Spans 12 ft. Girders .	158½	13 9	43,097	
Ditto .	Ditto . .	65 „ 20 „ „ . .	366¾	14 14	1,09 330	
11th Oct. 1924 .	Army Head Quarters, Simla	6 Corr. Iron Hay Sheds . .	79¾	22 4	35,478	
16th Oct. 1924 .	Cochin Govt., Trichur .	5 Spans—72′ 6″ Girders .	78½	14 15	23,493	
24th Oct. 1924 .	Exe. Engineer, Tuticorin Harbour Divn.	Steelwork for Extension to Portonove Jetty.	14	12 13	3,596	
14th Oct. 1924 .	Macbeth Bros. . . .	Steelwork for a Bungalow .	30¼	13 4	8,000	
28th Nov. 1924 .	N. W. Railway . . .	3 Skew Spans 83′ 1″ Girders .	273⅝	17 1	93,331	

12th Nov. 1924 .	Municipal Committee, Burma.	1—1,00,000 Gall. Tank with Staging.	46	17 2	15,758	
17th Nov. 1924 .	Forest Engineer, Tharrawaddi (Burma).	1 Road Bridge 65′ × 10′.	7½	17 5	2,595	
21st Nov. 1924 .	Ditto . .	1—60 ft. Span Girder Bridge 10 ft. Roadway.	7	17 13	2,495	
22nd Nov. 1924 .	Hukumchand Jute Mills .	2 M. S. Tanks with Staging .	9	15 2	2,720	F. O. R. Champdany.
3rd Dec. 1924 .	S. I. Railway . . .	1-60 ft. Plate Girders . .	23½	17 13	8,375	
17th Dec. 1924 .	O. & R. Railway . .	1 Span of 10 ft. B. G. Girder .	1½	13 2	328	
Ditto	Ditto . .	8 „ 60 ft. do. .	187½	16 7	61,608	
24th Dec. 1924 .	Ditto . .	1 Stretch of Trough Plating 84′ × 14′.	21½	18 0	7,734	
6th Dec. 1924 .	N. W. Railway . . .	Iron and Steelwork for Extension to Carriage and Wagon Shop.	339½	16 7	1,11,527	
4th Dec. 1924 .	B., B. & C. I. Railway .	1 Platform Shed 29′ 4″ × 645′ 0″	94	15 11	29,500	
16th Dec. 1924 .	Burma Railways . .	Steelwork in a Gangway for Saw Mill.	9½	17 0	3,320	C. I. F. Rangoon.
17th Dec. 1924 .	O. & R. Railway . .	1 M. S. Staging for 1,00,000 gall. Tank.	44½	12 3	10,800	
Ditto .	Ditto . .	1 M. S. Staging for 2,00,000 gall. Tank.	84½	13 4	22,330	
5th Jan. 1925 .	Ditto . .	5 Spans 60 ft. B. G. Girders .	148½	16 2	47,955	
Ditto .	S. I. Railway . . .	1 Span 60 ft. Girder. . .	23½	17 10	8,375	

Date.	Constituents.	Particulars of Orders.	Tons.	Rate per Cwt. to nearest Annas.	Value.	Remarks.
				Rs. As.	Rs.	
15th Jan. 1925 .	Burma Railways . .	3—20 ft. Span Girders . .	11	16 6	3,600	C. I. F. Rangoon.
26th Jan. 1925 .	A. B. Railway . . .	R. S. Joists, Bearing Plate, etc. .	20½	14 14	6,090	
27th Jan. 1925 .	Burma Railways . .	Steelwork in a Lifting Bridge .	74	21 10	31,997	C. I. F. Rangoon.
9th Jan. 1925	Rangoon Corporation . .	1 — 25,000 Gall. Tank and Trestle.	20	20 11	8,275	Ditto.
14th Jan. 1925 .	Burma Railways . .	Steelwork cut Timber Drawing Shed.	28½	17 10	10,050	Ditto.
19th Jan. 1925 .	N. B. Shaha, Calcutta .	Steelwork for Premises . .	59½	12 9	15,000	
31st Jan. 1925 .	Commanding Royal Engineer, Allahabad.	1 Ridged Shed 40′ × 200′ . .	19½	17 15	7,000	
4th Feb. 1925 .	B. N. Railway . . .	8 Spans of 6 ft. Girders . .	10½	15 14	3,328	
13th Feb. 1925 .	E. I. Railway . . .	20 Spans Plate Girders for 60 ft. Spans.	683½	15 10	2,13,744	
18th Feb. 1925 .	B., B. & C. I. Railway .	4 Spans of Girders 23 ft. overall	8	13 7	2,148	
7th Feb. 1925 .	Commanding Royal Engineer, Allahabad.	2 Ridged Roof Sheds 40′ × 200′ .	38¾	18 1	14,000	
23rd Feb. 1925 .	Indian Stores Department, Calcutta.	36 Trusses	11½	16 14	3,880	
26th Feb. 1925 .	Octavius Steel & Co. .	Steelwork for a Screw Pile Bridge.	59	11 2	13,100	
9th Mar. 1925 .	B. N. Railway . . .	Steelwork for Foot Over Bridge.	8½	13 5	2,260	

11th Mar. 1925 .	James Finlay & Co., Calcutta	Steelwork for 1 Susp nsion Bridge including Cables.	6	39 9	4,750	
12th Mar. 1925 .	Jodhpur Railway . .	Trough Flooring, Beams, etc. .	82¾	17 10	29,213	
16th Mar. 1925 .	David Sassoon & Co. . .	Steelwork for 2 Godowns . .	148¼	16 8	49,000	
18th Mar. 1925 .	Dist. Engineer, Mymensingh	18 Spans for 20 ft. Girders for Bridges.	54½	13 6	14,599	
26th Mar. 1925 .	O. & R. Railway . .	Steelwork for Boiler Shops .	640¾	17 4	2,21,360	
7th Apl. 1925 .	Jodhpur Railway . .	2—30 ft. Span plate Girders .	19¾	16 2	6,380	
15th Apl. 1925 .	Tata Iron & Steel Co. (Colliery Department) M/A, Kilburn & Co.	Steelwork in 4 Back Posts .	24½	14 10	7,172	
17th Apl. 1925 .	O. & R. Railway . .	1—30 ft. Span Girder . .	7½	15 11	2,356	
7th Apl. 1925 .	B. N. Railway . . .	Steelwork for a Road Bridge .	17¾	16 3	5,750	
20th Apl 1925 .	Ganges Manfacturing Co. .	Steelwork for a Boiler House .	74½	17 9	26,110	
25th May 1925 .	B. N. Railway . . .	1 Steel Staging . . .	20¼	14 7	5,854	
Ditto	Steel Bros., Burma . .	1 Open Shed 150′ × 70′ . .	32½	18 6	11,940	C. I. F. Rangoon.
10th June 1925 .	E. B. Railway . .	12 Spans of 6′ 6″ B. G. Girders .	8½	12 14	2,184	
,, Ditto . .	Ditto . . .	44 ,, 10′ 0″ ,, .	63	12 6	15,576	
Ditto .	Ditto . . .	22 ,, 13′ 0″ ,, .	43	12 9	10,824	
Ditto .	Ditto . . .	1 Span 14′ 0″ ,, .	2¼	13 2	592	
Ditto .	Ditto . . .	18 Spans 20′ 0″ . ,, .	70¼	14 5	20,106	
1st June 1925 .	B. N. Railway . .	Steelwork for an Engine Shed .	42¼	17 11	14,950	

Date.	Constituents.	Particulars of Orders.	Tons.	Rate per Cwt. to nearest Annas.		Value.	Remarks.
				Rs.	As.	Rs.	
5th Aug. 1925 .	Burma Railways . .	8—20 ft. Span Girders . .	29	15	14	9,200	C. I. F. Rangoon.
10th Aug. 1925 .	A. B. Railway . .	13 Bridge Girders 12′-0″ Span	19	13	8	5,135	
Ditto .	Ditto . . .	25 Bridge Girders 20′-0″ Span	85	13	7	22,875	
Ditto .	E. I. Railway . . .	7—27′-0″ Span. M. S. Plate Girders.	56	14	8	16,240	
8th Aug. 1925 .	Coromandal Co., Coconada .	Steelwork for 1 Double Godown.	16½	18	8	6,110	
19th Aug. 1925 .	Assistant Garrison Engineer, Bareilly.	Staging for Tank . . .	15½	18	1	5,600	F. O. R. Shahjehanpur.
28th Aug. 1925 .	David Sassoon & Co. . .	Steelwork for the Roof of a Power House.	11	17	13	3,920	
4th Sept. 1925 .	E. I. Railway	1 Span of 50 ft. Plate Girder .	20¼	16	15	6,850	
16th Sept. 1925 .	G. S. Behara & Sons, Akyab	1 Tank & Staging . . .	11¾	16	13	3,956	C. I. F. Akyab.
22nd Sept. 1925 .	B. N. Railway . . .	21 Spans of 16′ 2″ Joist Girder	21¾	12	9	5,460	
30th Sept. 1925 .	A. B. Railway .	Ironwork for a Goods Shed 50′ × 30′.	8¼	16	7	2,712	
6th Oct. 1925 .	B. N. Railway . .	16 Spans 60 ft. Clear B. G. Girders.	428¾	15	0	1,28,528	
15th Oct. 1925 .	A. B. Railway . . .	Posts and Sliding Doors, etc. .	13½	16	3	4,379	
22nd Oct. 1925	Ditto . . .	1 Steel Staging & 2 Tanks .	7¾	18	1	2,795	

28th Oct. 1925 .	Forest Engineer, Therawaddy.	1 Road Bridge 30′ 0″ × 12′ 0″.	10	19 8	3,900	C. I. F. Rangoon.
Ditto. .	Ditto . . .	1 Lattice Girder Bridge 60′ × 10′	7	16 7	2,300	Ditto
Ditto.	M. & S. M. Railway . .	Floor Joists, Columns, etc. .	51¼	11 11	11,960	
10th Nov. 1925 .	Pegu Municipality . .	1 Open Shed	22½	16 11	7,500	C. I. F. Rangoon.
19th Nov. 1925 .	Army Head Quarters, Simla	2 Corr. Iron Hay Sheds . .	26¼	20 6	10,690	F. O. R. Okara.
7th Dec. 1925 .	A. B. Railway . . .	1 Span 40 ft. Girder . .	9	14 9	2,616	
Ditto .	Ditto . . .	2 Spans 30 ft. „ . .	11⅞	14 9	3,420	
8th Dec. 1925 .	E. B. Railway . . .	2 „ 30 B. G. Girder . .	23⅞	15 1	7,140	
9th Dec. 1925 .	A. C. Martin & Co., Rangoon	1 Span 57′-6″ Bridge . .	17½	17 4	6,107	C. I. F. Rangoon.
10th Dec. 1925 .	Indian Stores Dept., Delhi .	3 Skew Plate Girder Spans .	125¼	17 7	43,608	
7th Dec. 1925 .	Executive Engineer, Jhansi Provincial Divn.	Iron & Steelwork for Bharatkup Stone Quarry.	11½	13 15	3,200	
11th Dec. 1925 .	E. I. Railway . . .	1 M. S. Staging 50 ft. . .	11¼	12 10	2,845	
14th Dec. 1925	Ditto . . .	1 ditto for Tank . .	52½	14 6	15,118	
Ditto .	Ditto . . .	4 ditto ditto . .	32½	14 2	9,192	
Ditto .	Tata Iron & Steel Co., Ltd., Colliery Dept., M/A, Kilburn & Co.	Steelwork in Back Posts . .	43	13 11	11,780	
17th Dec. 1925 .	M. & S. M. Railway . .	1 Staging 32′ 4½″ high . .	17¼	12 3	4,200	
24th Dec. 1925 .	Josts Engineering Co. . .	2,100 Pcs. of Channel Steel Arms.	7¼	16 5	2,363	

Date.	Constituents.	Particulars of Orders.	Tons.	Rate per Cwt. to nearest Annas.	Value.	Remarks.
				Rs. As.	Rs.	
29th Dec. 1925 .	S. I. Railway . . .	2 Hemispherical Tanks 20,000 Gall.	24½	18 5	8,980	
12th Jan. 1926 .	E. I. Railway . . .	Steelwork for Strengthening Karmanasha Bridge.	125	17 2	42,741	
27th Jan. 1926 .	I. I. & S. Co., Ltd. . .	Chuti Ore Bunker . . .	39¼	18 8	14,510	
30th Jan. 1926 .	E. I. Railway . . .	3 Spans 40 ft Clear Girders .	42¼	13 4	11,208	
9th Jan. 1926 .	Ditto . . .	Columns, Purlins, etc. . .	16	15 10	4,996	
15th Jan. 1926 .	B. N. Railway . . .	Steelwork for Scrap Yard & Platform Cover at Khargpur.	21¾	14 12	6,420	
20th Jan. 1926 .	Secretary to Govt. of Bihar and Orissa.	Steelwork & Corrugated Sheets for 100 Schools.	241	14 7	69,700	
23rd Jan. 1926 .	Patiala Estate . . .	1 Boiler Shed 52′ ½″ × 55′ 4″ .	16¾	14 9	4,870	
26th Jan. 1926 .	Forest Engineer, Tharrawaddy, Burma.	1—60 ft. Span Bridge . .	6¾	15 15	2,150	C. I. F. Rangoon.
30th Jan. 1926 .	E. I. Railway . . .	Steelwork for shed . . .	60¼	19 13	23,789	
3rd Feb. 1926 .	Hooghly Mills Co. .	Steelwork, etc., for Extension of Jetty.	13½	17 10	4,760	
8th Feb. 1926 .	Burma Railways . .	2—5 Ton Gantries . . .	8¾	13 11	2,400	

Ditto .	Empress Mill, Nagpur .	Roof Trusses, etc., for Boiler House.	30½	11 9	7,000	
24th Feb. 1926 .	Corporation of Calcutta .	1 Lattice Girder Bridge over Circular Canal.	154¾	13 10	42,149	
26th Feb. 1926 .	Sulaiman Kasim .	19 Double and 19 Single Stanchions.	9¾	12 13	2,500	
1st Mar. 1926 .	B., B. and C. I. Railway .	4 Spans Girders Skew 20′ 0″ clear	18¾	13 5	5,000	
25th Mar. 1926 .	E. I. Railway . . .	4 Spans 12 ft. Trough Girder 2 „ 10 ft. Ditto.	26	16 12	8,710	
2nd Mar. 1926 .	Ditto . .	1 Shed 63′ 0″	11	22 8	4,948	
Ditto .	C. I. C. Railway .	2 Tanks with Staging . .	32½	12 4	7,950	
Ditto .	Ditto . . .	1 ditto . .	18¼	12 2	4,421	
Ditto .	Ditto . . .	4 ditto . .	20	12 8	5,000	
6th Mar. 1926 .	E. I. Railway . . .	1 M. S. Staging . . .	20¾	11 12	4,882	
Ditto .	Ditto	Ditto . . .	26	11 11	6,082	
31st Mar. 1926 .	M. & S. M. Railway . .	Columns and R. S. Joist . .	15	12 2	3,644	
8th Apl. 1926 .	N. W. Railway . . .	3 Skew Spans of 45 ft. overall .	41	14 4	11,685	
14th Apl. 1926 .	Indian Stores Department .	1 Steel Tank 80,000 Gall. with staging.	60	15 5	18,350	F. O. R. Mandalay.
Ditto .	E. I. Railway . . .	14 Spans of 6 ft. Girders . .	13	11 15	3,099	
17th Apl. 1926 .	C. I. C. Railway . .	7 „ of 20 ft. „ . .	33	12 6	8,162	
Ditto .	Ditto . . .	3 „ of 12 „ „ . .	6	11 7	1,370	

Date.	Constituents.	Particulars of Orders.	Tons.	Rate per Cwt. to nearest Annas.	Value.	Remarks.
				Rs. As.	Rs.	
17th Apl. 1926 .	Bhubrighat Tea Estate .	20 Sets of Cooly Lines . .	14¾	11 9	3,420	
23rd Apl. 1926 .	E. B. Railway . . .	10 Spans of 20 ft. Girders .	43½	12 6	10,790	
Ditto .	Port Commissioners, Calcutta	R. S. Joists for Calcutta Jetties	104½	9 0	18,774	
26th Apl. 1926 .	C. I. C. Railway . .	2 M. S. Tanks with stagings .	10	12 8	2,500	
28th Apl. 1926 .	Lahore Electric Supply Company.	1 ditto .	20¼	12 12	5,170	
29th Apl. 1926 .	St. Aloysius' School, Vizagapatam.	Columns and Beams . . .	28	11 3	6,256	
10th May 1926 .	Bhubrighat Tea Estate .	Corr. Iron Shed 36′ × 120′ long .	17	23 7	7,970	
11th May 1926 .	E. I. Railway . . .	Platform Shed 15′ × 244 ft. .	26	16 2	8,395	
14th May 1926 .	Mohini Mills Ld. . .	Columns and Architraves . .	21¾	10 11	4,637	
24th May 1926 .	B. N. Railway . . .	20 Galvd. Iron Tanks . .	25	28 11	14,340	
27th May 1926 .	E. I. Railway . . .	Steelwork for Boiler House of Electric Power House at Dhanbad.	20	23 7	9,377	
28th May 1926 .	David Sassoon & Co. . .	M. S. Tanks with Stagings .	9¾	18 10	3,631	
1st June 1926 .	Orissa Feudatory State, Sambalpur.	Strengthening one 80 ft. span Road Bridge.	8	18 12	2,995	

8th June 1926 .	S. I. Railway . . .	One Corr. Iron Shed 25′ × 37′ 6″	3½	36 3	2,533	F. O. R. Trichinopoly.
2nd June 1926 .	E. I. Railway . . .	R. S. Joists with cleats . .	10½	9 10	2,070	
16th June 1926 .	Ditto . . .	One Closed Goods Shed 2 bays long.	13	22 12	5,916	
Ditto .	Ditto . . .	Foot-over Bridge . . .	39	21 9	16,821	
Ditto	Ditto . . .	Ditto . . .	41	21 13	17,878	
12th June 1926 .	S. I. Railway . .	3 Goods Shed 25′ × 37′ 6″ . .	10	38 0	7,599	F. O. R. Shoranur.
22nd June 1926.	E. I. Railway . . .	Doublepath Foot-over Bridge .	115	20 12	47,788	
Ditto .	Ditto . . .	Whiting Hoist Shed 100′ × 50′ .	36	18 13	13,561	
23rd June 1926 .	Burma Railways . .	Shed over Transhipping line .	22	23 15	10,540	C. I. F. Rangoon.
Ditto .	Ditto . .	Covered Way to Station Building to Jetty.	5½	22 3	2,440	Ditto.
Ditto .	Ditto . . .	Covering to 108′ Span Floating Girder.	5	21 6	2,136	Ditto.
Ditto .	Ditto . . .	2—85 ft. Span Floating Girder with covering.	19½	36 14	14,374	Ditto.
Ditto .	Ditto . . .	Pontoon Shed	8	27 4	4,355	Ditto.
Ditto .	Ditto . . .	Shed for Passenger Platform .	18½	22 7	8,300	Ditto.
5th July 1926 .	Mawchi Mines, Agents, Gasper & Co., Burma.	Steelwork for a Godown 20′ × 80′	10	13 12	2,750	Ditto.

(11) *Letter from the Secretary, Tariff Board, to Messrs. Burn and Company, Limited, and the Indian Standard Wagon Company, Limited, Howrah, dated 2nd September 1926.*

I am directed to request you to supply the Tariff Board with a statement (with 6 spare copies) showing your monthly output of wagons for the first seven months of 1926. If for any special reasons the output for any particular month shows a large increase or reduction, please give an explanation of such increase or reduction.

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(12) *Letter from Messrs. Burn and Company, Limited, to the Secretary, Tariff Board, Calcutta, dated 6th September 1926.*

With reference to your letter No. 717 of the 2nd instant, we enclose a statement of B. G. Underframes and Wagons delivered during the first 8 months in 1926 and our anticipated delivery for September.

We received the order of 137 Underframes from the E. I. Railway at the end of July 1925 but owing to the time required for receipt of Home fittings we could not start delivery before January 1926; even then we were approximately five months ahead of our promised completion date.

We received an order from the Railway Board for 1,000 A-2 Wagons at the end of December 1925; there was the usual interval required for receipt of Home fittings and we commenced delivery in June 1926. It will be noted from the output statement that by the end of this month we shall be ahead of our promised delivery and we shall have to slow up production if no further orders are placed with us.

Enclosure.

BURN AND COMPANY, LIMITED.

Output of Rolling Stock.

Month.	Output.		Remarks.
	Wagons.	B. G. Underframes.	
1926.			
January	...	10	No order in hand for Wagons.
February	...	25	
March	...	33	
April	...	22	
May	...	44	
June	48	3	Commencement of order.
July	107	...	Despatch of otherwise completed wagons delayed by late supply of Vacuum Brake causing an abnormal output in August.
August	250	...	
September	150	5 Six-wheeled Bogie Underframes.	Anticipated output.

(13) *Letter from the Indian Standard Wagon Company, Limited, to the Secretary, Tariff Board, Calcutta, dated 6th September 1926.*

With reference to your letter No. 716 of the 2nd instant, we enclose herewith a statement of the wagons delivered during the first eight months of 1926 and the anticipated delivery for September.

It will be noted that the output for the first three months was low as we had to slow up production in order to prevent a hiatus and the dispersal of our labour force between the completion of the order for the 425 wagons and the commencement of the order for 1,750 wagons.

We received the order for the 1,750 wagons at the end of December 1925 but could not start delivery before June owing to the time required for receipt of Home fittings. From the output during June, July, August and our anticipated output for September, you will observe that our average output is approximately 200 wagons per month. If, however, we do not receive in the near future a further order for wagons we shall be again compelled to slow down production.

Enclosure.

THE INDIAN STANDARD WAGON COMPANY, LIMITED.

Output of Rolling Stock.

Month.	Output.	Remarks.
1926.		
January	100	Completion of Orders in hand. Rate of production reduced to retain labour.
February	84	
March	11	
April	...	
May	...	
June	142	Commencement of new Order.
July	105	Output delayed in July owing to late supply of Vacuum Brake and only partially made up in August.
August	270	
September	250—300	Anticipated Output.

(14) *Letter, dated 7th September 1926, from Messrs. Burn and Company, Limited.*

As requested by telephone we enclose herewith a copy of our tender No. OBW. 1515/Q. of 12th October 1925, for the Girders for the Jhelum Bridge.

Enclosure.

(COPY.)

OBW. 1515/Q.

12th October 1925.

The Agent,
N. W. Railway,
Lahore.

"Tenders for Girders required for Jhelum Bridge."

DEAR SIR,

In reply to your letter No. 211-S. N., dated 15th August 1925, we have pleasure in quoting for the supply and manufacture, of all iron and steel work in—

(*a*) 53 girders each 94′ 6″ c/c bearings complete with cast iron fixed and expansion bearings, holding down bolts and turned bolts.

(*b*) 73 pieces pressed steel trough flooring 2′ 10″ × 10′ 1″ long × ⅜″ thick all as per the ferro of your drawing No. MB. 83A/1 RWP/PFX accompanying your enquiry.

Prices.
(*a*) Rs. 8,704 (Rupees eight thousand seven hundred and four) per girder,
(*b*) Rs. 5,466 (Rupees five thousand four hundred and sixty-six only) lump sum,

f.o.r. our Works Siding.

Delivery.—2 girders in 22 weeks from date of receipt of order and the balance at the rate of 2 per month thereafter to completion.

Terms of Payment.—Value of raw materials as delivered in our Yard and the balance against despatches.

Steel work.—Girders will be despatched each in three pieces as indicated and rivets will be supplied for site connections with an allowance of 10 per cent. for wastage.

The Trough flooring will be despatched unrivetted, bundled for transport and rivets supplied for site connections with an allowance of 10 per cent. for wastage.

Raw materials will be manufactured by Messrs. Tata Iron and Steel Company, Limited, or well-known British manufacturers.

The rates per cwt. as the above prices are—

(*a*) Rs. 17 per cwt. all round including bearings, etc.,
(*b*) Rs. 14-6 per cwt.,

and the total cost of the work complete as specified above will be Rs. 4,66,778 f.o.r. our Works Siding.

Painting.—One shop coat linseed oil and one shop coat lead paint of an approved colour. Material will be matchmarked to facilitate erection.

Trusting to be favoured with your order.

Yours faithfully,

(Sd.) BURN & CO.,
Managing Agents.

MESSRS. BURN AND COMPANY, LIMITED. THE INDIAN STANDARD WAGON COMPANY, LIMITED.

B.—ORAL.

Oral Evidence of Messrs. J. D. BALFOUR and R. F. WALKER recorded at Calcutta on the 20th July 1926.

Capital of the Indian Standard Wagon Company.

President.—We are very much indebted to you, gentlemen, for having worked out the costs in the way we wanted them to be worked out. The only alteration in this first part that I suggest is that the overhead charges as per schedule 2 should be cut out and you will show them separately. Item 3 goes out, that is all. That gives us what we consider to be your works costs. You will of course have to correct the totals also.

Mr. Walker.—There is just a point about the statements we gave you. We did not take into consideration the working capital.

President.—Yes, you have.

Mr. Walker.—You have taken the debenture loan which was raised to complete the works—but the debenture loan actually went into the block.

President.—That would not come into this part at all. That would go into your capital.

Mr. Walker.—We have given you a detailed statement of the working capital that is necessary.

President.—You claim Rs. 14 lakhs as working capital, but you say there may be a margin of Rs. 2 lakhs making it Rs. 16 lakhs. You have included interest on debenture loans which comes to Rs. 1,51,000 without counting the sinking fund.

Mr. Walker.—Interest on debenture loan?

President.—Yes, on loan and overdraft. You have included that. Rs. 1,35,000 is the equivalent of 8 per cent. on Rs. 17 lakhs. What more working capital do you want? You have already put it in.

Mr. Walker.—No, for of the interest on loans shewn, by far the bigger item is the interest on the Rs. 12 lakh debenture loan which was spent in finishing the works and is not free as working capital.

President.—Nothing else goes into this account in the overhead charges. Whatever your earning capital, it does not go into this. If you put in your interest on working capital it will have to be transferred to your capital. What do you gain by it?

Mr. Mather.—There are no other charges to be met other than provision of profit on your capital?

Mr. Balfour.—That was the total charge.

Mr. Mather.—Any receipts you may have had in excess of what was required to meet these charges would be available as profit on the capital of the Company?

Mr. Balfour.—Yes.

President.—This item of sinking fund, we do not take into consideration. If you treat your debenture as part of your capital then you have got to cut down your earnings on that amount until the debentures are wiped off.

Mr. Balfour.—The debenture has got to be repaid.

President.—It may be paid off by raising another loan when it is due. If you add Rs. 12 lakhs or whatever it is to your capital, you cannot have a return on that as well as the sinking fund, that is the point. It will be a gradually diminishing amount.

Mr. Balfour.—Yes.

President.—What do you mean by this " We have to make a calculation to extinguish our sinking fund for 20 years ". It is much better to take that as a sort of permanent investment to give you a permanent rate of interest. Why should you introduce an unnecessary complication in your calculations?

Mr. Mather.—You cannot reasonably expect the Tariff Board to provide sinking fund on your Rs. 12 lakhs of debentures and at the same time provide for your interest on that full amount. That means double provision, which you cannot expect the Tariff Board to do.

President.—If you want your sinking fund, drop out the 12 lakhs from your capital. If you take your 16 lakhs working capital then you can't add 12 lakhs to your block.

Mr. Walker.—No.

President.—The best thing for you to do in this case is to give the actual amount of interest that you have paid on your working capital and take out this sinking fund from here.

Mr. Walker.—We agree with you. The sinking fund goes out.

President.—Then I take the interest on loan.

Mr. Balfour.—Rs. 12 lakhs is the debenture loan.

President.—You have got Rs. 12 lakhs there and Rs. 3 lakhs overdraft.

Mr. Balfour.—Approximately.

President.—That makes your total amount of working capital (Rs. 12 lakhs *plus* Rs. 3 lakhs) Rs. 15 lakhs.

Dr. Matthai.—The whole debenture loan went into block.

Mr. Balfour.—Yes.

President.—How did you borrow your working capital?

Mr. Walker.—In three ways. Materials financed by 90-day bills.

President.—What is the amount?

Mr. Balfour.—It varies from time to time.

Dr. Matthai.—Are you buying from Tatas?

Mr. Balfour.—Yes. Tatas draw a three months sight draft on us.

President.—They are discounted at the bank rate.

Mr. Balfour.—Yes.

President.—Does it not work out to very much the same? You say Rs. 14 lakhs to Rs. 16 lakhs is what you require.

Mr. Balfour.—Rs. 12 lakhs debenture loan is absolutely locked up in the block.

President.—You say that your working capital comes to about Rs. 12 to Rs. 14 lakhs. This is really Rs. 12 lakhs *plus* Rs. 3 lakhs and there must be a charge on working capital.

Mr. Balfour.—The charge for working capital is, as I say, Rs. 16,000.

President.—That is all that came in that year.

Mr. Balfour.—Yes, for that period.

President.—If that is so, we have nothing to say.

Mr. Balfour.—That is about Rs. 3 lakhs. That is only on the bank overdraft. We are also financed by 90-day bills and more recently by undivided profits which have remained in the business.

Dr. Matthai.—If you work out all the accommodation that you got from Tatas 90-day bills, that amount excluding the overdraft would come to somewhere about Rs. 12 lakhs on the average for the period that you have been working on this 1,675 wagons.

Mr. Balfour.—We have put in a statement to that effect—second statement from the end—" The Indian Standard Wagon Company, Limited, working capital ". That is the money that has been locked up at the end of any one month in those various items.

Dr. Matthai.—Since you got your order for 1,250 from January 1925 it is worked out to somewhere between Rs. 12 and Rs. 14 lakhs.

Mr. Walker.—Approximately. Partly financed by a bank overdraft, partly by 90-day bills and partly by undivided profit. At one time our bank overdraft came to nearly Rs. 10 lakhs.

President.—Cut out all these items, interest on loan, interest on overdraft and add a note. "The above doesn't include our working capital. We consider that Rs. 12 to Rs. 14 lakhs is a reasonable amount for that," or whatever you want to say.

Mr. Walker.—Yes.

President.—We shall then make our own calculations as to what you ought to get.

Mr. Walker.—Quite so.

Mr. Mathias.—Actually Rs. 15 lakhs covers your working capital.

Mr. Walker.—If you want to ascertain the money actually locked up in the business you would have to take the share capital, *plus* the debenture, *plus* the working capital.

Mr. Mathias.—Then you are financing yourself by 90-day bills and bank overdraft.

Mr. Walker.—Yes.

Mr. Mathias.—The total comes to Rs. 15 lakhs.

Mr. Walker.—Yes.

Mr. Mather.—The price of Tata's material is Rs. 120 a ton. That of course is for payment within the ordinary period—a fortnight or something like that. You don't pay until 3 months after. Therefore you would have to pay a higher amount. Does that appear against your material charge or does it appear somewhere else?

Mr. Balfour.—What actually happens is this. Tata's generally discount their bills and they charge the discount.

Mr. Mather.—Where does it appear?

Mr. Balfour.—It is a separate charge for the accommodation.

President.—What happens is this. You put Tata's actual bill into the material account.

Mr. Balfour.—Yes.

President.—Instead of your finding all the working capital, Tatas find some of it for you and you pay the interest on it.

Mr. Balfour.—Quite.

Mr. Mathias.—Is that shown in the interest on loan?

Mr. Balfour.—Presumably. I cannot definitely say.

President.—I think it will simplify matters if you cut out all these items.

Mr. Walker.—Yes, and make a statement at the bottom that it doesn't include our working capital.

President.—It is really a matter of correcting the figures, I suppose. You say the total depreciation is Rs. 5,64,180, but I do not know on what basis you calculated it, because if you take the total depreciation even for 2 years (in 1924-25 it was Rs. 2,55,331 and in the other it was Rs. 2,01,183) it comes to Rs. 4,56,000.

Mr. Balfour.—We didn't depreciate to the full extent in any of these years.

Mr. Mathias.—I take it that your depreciation shown in this statement is the actual depreciation carried to your profit and loss account.

Mr. Walker.—It is.

Mr. Mather.—The President has pointed out the discrepancy. It is Rs. 5,64,000 as shown in your earlier statement. The total of 2 years is only Rs. 4,56,000 so that this amount shown on the most recent statement cannot be the actual one that you put down in your books.

Mr. Walker.—We see your difficulty. In this statement of block values and depreciations the amount of depreciation, *viz.*, Rs. 2,01,183 shown against 1925-26 was calculated on the reduced value of the block, but this block reduction took effect as a matter of fact a few months ago. In making our statement for all these wagons we show our depreciation on the old block value.

Mr. Mather.—Even 1924-25 when your old block was Rs. 70,21,170 you depreciated only Rs. 2,55,331.

Mr. Walker.—In that particular year we didn't write depreciation off to the full extent allowed by the Income Tax Authorities.

Mr. Balfour.—We had no more money with which to depreciate. We could not afford it.

President.—Is it merely a book entry or is it actual depreciation which you have put in to your depreciation fund?

Mr. Balfour.—Actual depreciation.

Mr. Walker.—Depreciation is a working charge and not an allocation of profit. It is a working charge for which we must provide whether we make a profit or not.

President.—What I mean is this: in a depreciation account you either earn the depreciation and then you debit the block and credit the depreciation fund with that amount and then the two correspond, or you write down the value of the block.

Mr. Balfour.—We simply write down the value of the block.

President.—That is the reason I want to know whether it was a book entry or whether it was actual depreciation which you set aside and which you carried forward to the depreciation fund.

Mr. Walker.—We don't quite follow you.

President.—Supposing depreciation comes to Rs. 100 in a year. If you have earned that Rs. 100 you depreciate your block and you put Rs. 100 in the depreciation fund account and credit it. If you have not earned Rs. 100. . . .

Mr. Walker.—What do we do?

President.—You debit it in your block account. What is it you have done? Have you earned the depreciation or is it merely a reduction of your block account?

Mr. Walker.—What actually happens is we debit profit and loss account and credit the depreciation fund. The depreciation fund account will reduce the block account as the years go by.

Mr. Mather.—You have got actually this Rs. 5½ lakhs?

Mr. Walker.—You won't find it on the asset side as a specific investment. It is invested in the business.

President.—It is there.

Mr. Balfour.—Yes.

President.—In that case these figures don't tally.

Mr. Walker.—Between the block statement and the cost statement? The difference is due to the fact that the figures in the manufacturing cost statement were made up before the reduction in block took effect. We saved by this block reduction Rs. 1,27,000 in depreciation per year.

President.—Let us determine your block value. What we want is the total value of your block every year, but don't deduct depreciation every year in that column. We want the total money expended on the block. Then put the depreciation in another column, so that it would be in line with our system. What it comes to is this: you have written down your block of Rs. 73,19,188 by Rs. 24,80,424. Is that right?

Mr. Walker.—Quite.

President.—You wrote off about a third of the value.

Mr. Walker.—Yes.

President.—That is because you bought your block at the time when prices were high.

Mr. Walker.—Yes.

President.—It should have been written down at the time when prices began to drop, about 1922-23. You take the block value Rs. 73 lakhs odd and then write it down by Rs. 24 lakhs.

Mr. Balfour.—It must not be forgotten that although we have written down the value of the block by Rs. 24 lakhs, the works could not be started as a going concern on the present block value. So we say that is merely the value of the machinery as the works stand, not the cost of starting up the works. The difficulties we have had in starting, cost us many lakhs of rupees.

Mr. Mather.—You have incidental losses of course during starting up not really represented by assets. You can give us a separate statement on that if you like.

President.—Does this reduction of Rs. 24 lakhs represent the value of the block as it would be if you bought it to-day?

Mr. Balfour.—Yes, the plant.

President.—That is just what I thought you were doing. The point is that this block which cost you Rs. 73 lakhs odd in 1921-22 is worth Rs. 24,80,424 less now.

Mr. Balfour.—That is to put up the works, but not to cover the incidental expenses in starting the works.

President.—Where have you shown that?

Mr. Balfour.—The managing agent has given up Rs. 3,40,000 and the debit to profit and loss account of Rs. 4,42,000 has been wiped off.

Dr. Matthai.—What sort of expenses are you speaking of?

Mr. Balfour.—The difficulty in getting labour.

President.—But that has nothing to do with the block value. You cannot say you lost on the block, because you lost some money in getting your labour trained.

Mr. Balfour.—The block value is quite correct.

President.—We are just trying to ascertain the block value. Would it be right to say that in your opinion if we took your book block value and deducted this Rs. 24 lakhs odd, we will get the present day block value?

Mr. Balfour.—That is right.

President.—As I say depreciation must be shown in another column. This is not the practice that we follow. The depreciation must be taken on the replacement value of the block.

Mr. Balfour.—From what year.

Mr. Mathias.—From the commencement. Take the capital cost at Rs. 49 lakhs and calculate depreciation on that.

Mr. Walker.—I take it what we have got to do is to write down the value of the block in 1921-22 by Rs. 24 lakhs being reduction of capital and thereafter depreciate on that.

President.—That is for our purposes. I am not asking you to change your accounting system.

Mr. Balfour.—We see your point. But why should we reduce our block when we had actually paid that money for it?

President.—If it will ease your conscience, I don't mind your keeping that figure but remove the amount of depreciation from it.

Mr. Balfour.—Yes.

President.—Also show your block value every year.

Mr. Balfour.—Yes.

Mr. Walker.—We spent a good deal more, but you argue that was our own fault.

President.—We don't say anything of the sort.

Mr. Mathias.—For the purpose of calculating the block value in the year 1925-26 and thereafter, please give us a short calculation from the year 1921-22 on the lines suggested by the President. We merely want the calculation.

President.—You were at perfect liberty to do anything you liked before we came into the enquiry. You could show Rs. 15 or Rs. 20 lakhs for depreciation every year.

Mr. Balfour.—We never in any one year fully depreciated.

Mr. Mather.—May we take it that the block value of your plant in 1925-26 is represented by this reduced sum of Rs. 43,34,000 which you show before depreciation for that year?

Mr. Balfour.—Yes.

Mr. Mather.—That is in your view a reasonable value of the block as it stands.

Mr. Balfour.—Yes.

Mr. Mather.—Before depreciation for the year is deducted.

Mr. Walker.—If we started with Rs. 48,38,000 in 1921-22, we would not arrive at Rs. 43,34,000 in 1925-26.

President.—It would be more than that because we don't deduct depreciation year by year.

Mr. Walker.—In calculating the depreciation, do you want us to adopt the straight line method or the diminishing balance method?

President.—Adopt our method. Are the rates that you have taken according to the Income-tax rates?

Mr. Balfour.—Yes.

President—Do the Income-tax authorities allow depreciation on the book value of the block or on the diminishing value?

Mr. Walker.—What they do is to take the initial value *plus* additions and write off the depreciation at the given rate.

President.—Then you consider that the Income-tax rate is a reasonable rate?

Mr. Walker.—Yes, for depreciation but not for obsolescence.

President.—That rate is not intended to include obsolescence.

Mr. Walker.—The Income-tax people at home give a special allowance for obsolescence, but not out here.

President.—Will you correct your figure in this summary?

Mr. Walker.—Yes, we will recalculate the depreciation on the method suggested by you and substitute your depreciation for our depreciation. Will you have the Income-tax rates for depreciation or will you have your own rate?

President.—It should be in accordance with your method. If we consider any alteration necessary, we shall make it.

Managing Agent's Charges.

President.—Then, I take it that your head office charges are actual charges that have been debited.

Mr. Balfour.—These are actuals.

President.—It strikes us that these charges are fairly heavy on a small concern like this. If you take the total charges, they come to about Rs. 1,50,453. In the case of the Tata Iron and Steel Company, we allowed Rs. 4 lakhs.

Mr. Balfour.—I do not know anything about the Articles of Association of Tata's. But Messrs. Burn and Company do not take any commission on purchases or sales.

President.—Nor do they, so far as we are concerned. They may be doing it but it is not in the evidence. If you refer to our first Report, you will find "The Company estimate the head office expenses at Rs. 4 lakhs, which is a reasonable figure. The Agents' Commission under the terms of their contract, on the assumption that the full dividends are earned, is Rs. 8·4 lakhs." According to your figures it would be about Rs. 2 lakhs.

Mr. Balfour.—According to Articles of Association, it is Rs. 12,000 a month, but we did not draw any managing agency fees for about three years. We only started drawing during the last year.

President.—One thing I should like to point out and that is that we shall take into account the fact that you have not drawn that amount, but we are concerned here with the arrangement itself just now. It is the arrangement to pay the Managing Agents Rs. 12,000 a month for a comparatively smaller business than Tata's that appears to us to be rather excessive.

Mr. Balfour.—You must not forget that in the case of the Indian Standard Wagon Company, Limited, and Messrs. Burn and Company, Limited, we do not merely act as Managing Agents. We act as actual managers, and consulting engineers, etc.

Dr. Matthai.—No separate fees of any kind are charged.

Mr. Balfour.—No separate fee for consultation or the actual management of the place is charged. We ourselves run the business.

Mr. Mather.—All the costs of buying and selling are taken over by Messrs. Burn and Company.

Mr. Balfour.—Yes, but there is no charge for buying or selling.

Mr. Mathias.—Buying or selling what—stores for instance?

Mr. Balfour.—Everything.

Dr. Matthai.—This does not represent merely the ordinary Managing Agents' service. It represents also the technical advice given by Messrs. Burn and Company.

Mr. Balfour.—Yes.

Dr. Matthai.—Besides technical advice, does it include anything else?

Mr. Balfour.—It includes the running of the works.

Dr. Matthai.—That is included in the service ordinarily rendered by Managing Agents.

Mr. Balfour.—Yes.

Mr. Mather.—It does not include the running of the works in the sense of the Indian Standard Wagon Works being directed by Messrs. Burn and Company?

Mr. Balfour.—Yes, it does.

President.—In the case of the Tinplate Company which is also a much bigger concern than yours, I think that it comes to about Rs. 5,000 a month.

Mr. Balfour.—For what?

President.—Managing agency fees and head office charges come to Rs. 5,000 a month.

Mr. Balfour.—What do they do?

President.—They do everything.

Mr. Balfour.—Do they take commission on the puchases generally?

President.—We cannot say if they do.

Mr. Balfour.—Is not that included in the works cost?

President.—We do not know if anybody gets any secret commissions. We cannot assume that they do. We can only go by what is before us.

Mr. Balfour.—We know in many companies they have a smaller managing agency allowance, but they take a certain percentage on all stores that are bought or sold.

President.—That we do not know. We cannot take that into account in the absence of evidence.

Mr. Mather.—Mr. Balfour is not referring to any secret commissions but to definite arrangements.

Mr. Balfour.—Yes.

President.—We have not come across a proved instance.

Mr. Balfour.—It is the case with 90 per cent. of the companies.

President.—If you take the total turnover in a year it comes to about Rs. 60 lakhs.

Mr. Balfour.—Yes.

President.—Ordinarily the Managing Agents would get a commission on profits.

Mr. Balfour.—If we make a profit?

President.—The scheme of protection is generally so framed that you are expected to make a certain amount of profit. Some Managing Agents charge a percentage on the gross turnover. That surely is a system which we cannot advocate in a case like this.

Dr. Matthai.—When exactly did you start claiming the managing agency fees?

Mr. Balfour.—January 1925.

Dr. Matthai.—You have calculated at the rate of Rs. 6,000 for the whole period.

Mr. Balfour.—Yes.

President.—Supposing for the sake of argument that on a capital of say Rs. 50 lakhs you make a profit of 10 per cent. According to your calculation, the Managing Agents will get Rs. 1,44,000, which would be a very large percentage.

Mr. Balfour.—We have never taken it, that is the point.

President.—I am just trying to point out that that is equal to about one-third of the total profits. That arrangement at first sight would strike one as rather out of the way.

Mr. Balfour.—We admit that.

President.—What do you suggest as a percentage on the nett profits that you should get as managing agency fees? Supposing the Company made Rs. 5 lakhs, how much do you think that you ought to get out of that?

Mr. Walker.—We should like to have notice of that question.

Mr. Balfour.—I don't think that we are overpaid at Rs. 6,000 a month.

Mr. Mather.—Is this a permanent arrangement?

Mr. Balfour.—Yes.

Mr. Mather.—Has Rs. 12,000 been completely dropped?

Mr. Balfour.—According to the Articles of Association, it is still Rs. 12,000 a month.

Mr. Mather.—If the Standard Wagon Company is in a better position, Messrs. Burn and Company hoped to get Rs. 12,000 a month.

Mr. Balfour.—We don't think so.

Mr. Mather.—Have they finally given up their claim for Rs. 12,000 and substituted for that a claim for Rs. 6,000?

Mr. Balfour.—No. The Articles of Association have not been altered.

President.—In ordinary business what would be considered a fair percentage on the nett profits?

Mr. Walker.—Could you consider the managing agents as partners in the business? Would you look at it that way?

President.—Take the Tata Iron and Steel Company's case for instance. According to their agreement their commission will come to Rs. 8·4 lakhs.

Mr. Balfour.—Is that the managing agency allowance?

President.—Yes, if they get the full amount. As a matter of fact they claim Rs. 4 lakhs which we considered as reasonable. That would be earned on Rs. 120 lakhs that we calculated for the profits of the Company.

Mr. Balfour.—We don't know whether they have commission on sales, purchase of stores, etc., as well.

President.—We have made no allowance for these things. In making our calculation we took all the charges into account and we have not come across any such charge there.

Mr. Mather.—Tata's conduct their own sales and meet their own expenses.

President.—What it comes to is that it is about a third on the basis of your Articles of Association. I should consider your commission very high.

Mr. Balfour.—You will notice that we are charging Rs. 6,000 and not Rs. 12,000.

Dr. Matthai.—Is there any difference between Bombay and Calcutta practice?

Mr. Balfour.—We do not know.

Dr. Matthai.—With a business turnover of Rs. 60 lakhs would that be considered reasonable in Calcutta? Take your total cost here, which is roughly about Rs. 60 lakhs. On that 60 lakhs business you are paying 1 lakh in the way of managing agents fees. What is your opinion about that as a business man in Calcutta?

Mr. Balfour.—According to the Calcutta standard—

Dr. Matthai.—What I want to know is your opinion with reference to practice in Calcutta, where there is a business the size of which can be measured by Rs. 60 lakhs and you pay Rs. 1 lakh managing agency fees.

Mr. Balfour.—That would be considered moderate according to the Calcutta standard. They are also paid commission on purchase of stores and on sales, as well as commission on the profit.

Dr. Matthai.—You yourself consider that this is not unreasonable?

Mr. Balfour.—That is so.

Dr. Matthai.—Supposing you increase your output to 3,000 wagons, can you tell me at all what the fate of managing agents' commission will be? Will it exceed Rs. 6,000?

Mr. Balfour.—It may remain the same.

Dr. Matthai.—There is no intention of going back to the amount fixed in the Articles of Association.

Mr. Balfour.—I think we might guarantee that.

Mr. Mathias.—Actually you don't charge this amount of Rs. 12,000, do you?

Mr. Balfour.—No. We charge only Rs. 6,000.

Mr. Mathias.—If for purposes of our calculation we took only Rs. 6,000 will that be doing any injustice to the company in its present state?

Mr. Balfour.—No.

President.—You think that is reasonable?

Mr. Balfour.—I think it very moderate.

President.—Are there any other charges that have not gone into this statement?

Mr. Balfour.—No.

President.—You will please give us a revised statement of these overhead charges.

Mr. Walker.—Yes. There is one point which we might perhaps make clear. This item of London office expense, it is shewn as a credit which accrued in a previous period, in future it will be a debit.

Mr. Balfour.—That was a period prior to 1924-25.

President.—Are these cost summaries that you have given here the actual cost sheets of the wagons mentioned?

Mr. Balfour.—Yes. These are actual cost sheets.

President.—We shall go into your costs to-morrow.

Wagon types.

President.—On page 233 of your representation you say: "We have been able to earn this tribute partly because the Government, since the advent of the bounty scheme, have given us an opportunity of exploiting the economies of large scale production by placing with us relatively large orders, and also the orders have been of one type."

Are you referring both to yourselves and the Indian Standard Wagon Company?

Mr. Balfour.—Yes.

President.—How many types did you make formerly?

Mr. Balfour.—3 types.

President.—Now you are given an order for only one type.

Mr. Balfour.—Yes. We were given an order for 1,250 C-2 and another 425 C-2. This year we got an order for 1,426 C-2 and 324 C-3.

President.—Between the two Companies.

Mr. Balfour.—The Indian Standard Wagon Company have got 1,426 C-2 and 324 C-3. Burn and Company Limited got 1,000 A-2.

Dr. Matthai.—1,000, are they covered wagons?

Mr. Balfour.—Yes.

President.—C-2 are open wagons.

Mr. Balfour.—Open wagons high side, C-3 open wagons low side.

Dr. Matthai.—The dimensions are the same.

Mr. Balfour.—C-3 are a little longer.

Mr. Mathias.—A1?

Mr. Balfour.—A-1 is practically the same length as C-2.

Mr. Mathias.—But covered, is it?

Mr. Balfour.—Yes.

President.—There have been no alterations in the types since.

Mr. Balfour.—Not since I. R. C. A. type was accepted.

President.—That is to say you have been getting repeat orders as regards these types without any substantial alterations in the specifications.

Mr. Balfour.—Yes. The only alteration may have been in bulk, spring and door controllers, otherwise the specifications were the same.

The new types.

President.—Now according to the replies of the Railway Board to our questions, they are making alterations in the types.

Mr. Balfour.—We have got a copy of the Railway Committee's Report and the type is entirely altered. It means scrapping all our jigs and 80 per cent. of our dies before starting the manufacture of these new types.

President.—They are having 13 types of broad gauge instead of 16 I. R. C. A.

Mr. Balfour.—They are now going to adopt the central coupler which entirely alters the whole design of underframe.

President.—Will they involve the making of new jigs and dies?

Mr. Mather.—Have you estimated yet what the costs of a set of new jigs and dies for one of these new wagons will be?

Mr. Balfour.—Take the old dies which the Wagon Co. made and which cost somewhere about Rs. 70,000 to Rs. 80,000.

President.—For each type.

Mr. Balfour.—That is for C-2 and an additional Rs. 20,000 for the C-3.

President.—The Railway Board or the railways cannot be tied down to any particular types.

Mr. Balfour.—No.

President.—Otherwise they would never change.

Mr. Balfour.—Quite.

Mr. Mather.—I take it you are not protesting in any way against the introduction of any new type.

Mr. Balfour.—No. What we are protesting against is that they state that the drawings will not be ready before October. Assuming that drawings are ready in October and if we get them then we have all our lists of materials to make up and they have to be sent home for the purpose of ordering fittings, etc. We consider that we cannot start the manufacture of the new type before next August even if orders are placed in November.

Dr. Matthai.—Your position is this. As far as the replacement of the existing jigs and dies is concerned—that is a thing which you must be prepared to face, but the real hardship is that the thing is done with hardly sufficient notice.

Mr. Balfour.—I may just point out that we have had to bear a lot of expense in the manufacture of jigs for the Indian Standard Wagon Company the benefit of which we have enjoyed for only two years, last year and this year.

President.—That would also happen in the case of the Home manufacturer. That is common to all.

Mr. Balfour.—Yes. It is fairly hard on a Company like the Indian Standard Wagon whose finances are in a straitened condition.

President.—You cannot expect the Railway Board to go in for a type which is considered no longer suitable in order to enable you to save the cost of a jig.

Mr. Balfour.—We are not objecting to that at all.

Mr. Mather.—I take it that the cost of jigs and dies which you have already had to prepare for these old types has already been distributed in the cost that you have shown us here.

Mr. Mathias.—I suppose you will have to slow down your rate of manufacture until you get on to the new design.

Mr. Balfour.—We will have to disperse all our labour and probably part of our supervision. We can't afford to keep them.

President.—As regards your present contract, when will you be able to complete delivery?

Mr. Balfour.—By 15th March 1926.

President.—After that you won't have any work from March to August.

Mr. Balfour.—They will probably place orders with us, but there will be no outturn.

President.—Suppose you get your orders in November, so far as the bulk of your material is concerned, you can get your supplies before that surely.

Mr. Balfour.—No. You take the order that we got in December. When you were at the works, you saw the large number of wagons standing waiting for unpacked fittings. We got the order in December and we immediately cabled home within 3 days of getting the order. We are now only just starting to despatch these wagons, simply because we can't get the home fittings within about 6 months.

Mr. Mather.—You have not made any delivery yet.

Mr. Balfour.—We have made 142 only.

Mr. Mather.—When was that?

Mr. Balfour.—In June. We put this up to Sir Charles Innes when he was down in Calcutta. He went up to Simla, thought it over and gave us a letter saying that tenders would be called for in May-June of this year to enable us to start delivery of wagons in April the following year. Also he confirmed this in his speech in the Legislative Assembly in February. It is now July and as yet we have had no call for tenders.

Dr. Matthai.—In the ordinary course you would have got the order in May and June.

Mr. Balfour.—That was what Sir Charles Innes promised us.

President.—The Railway Board doesn't delay matters purposely. It must consider the reports of committees. As you know it is a very big organisation and it has got to consult so many departments and if the Railway Board is not in a position to give you orders, what do you expect the Railway Board to do? Do you expect it to give you an order for the old type?

Mr. Balfour.—Yes, to carry us on.

President.—If they are changing the type, it means that they will have to wait for another 20 to 25 years before they can change if they give you an order for the old type. Is it fair to expect the Railway Board to do that simply to enable the works to be kept going?

Mr. Balfour.—I think it is a fair proposition to give us, as we suggest, 600 wagons for the Indian Standard Wagon and 400 wagons for Burn and Company, Limited. When we put the matter up to the Chief Controller of Stores, Indian Stores Department, he said that we have got a very good case.

Mr. Mathias.—I take it that your claim really is that either the Railway Board should have given sufficient notice to the manufacturers in this country or if this was impossible you should be given enough orders of wagons of the old type to carry you on. Is that correct?

Mr. Balfour.—That is correct. It is not asking too much. If it is not given, it will be a great blow to the wagon builders. Sample wagons have to be built and as we built practically all the sample wagons for the I. R. C. A., we have experience of the number of mistakes that were in the I. R. C. A. standard wagon designs. There is no reason why there should not be mistakes in the new type also.

Dr. Matthai.—Taking this particular case of orders having been postponed till further designs are made, how does that affect you in relation to foreign wagon firms? Does that give them any advantage over you?

Mr. Balfour.—It does not give them any advantage, but the foreign manufacturers have got the world wide market. We have only got the Indian market. It means completely shutting down our plant.

President.—You say after the end of March, that is to say if you complete your contract exactly within the time, for 4 months, *viz.*, April, May, June and July, you will have no work.

Mr. Balfour.—That is right.

Mr. Mather.—You will not be able to commence before August, is that the position?

Mr. Balfour.—Quite so. Sample wagons will have to be approved before we go on with the complete manufacture. When we get an order now, we immediately start and build a sample wagon. That sample wagon remains until the completion of the order. We can take the risk of going on building A-2 or C-2 types as we have built them before. We can go on with the manufacture of the whole of the component parts. With a new design we cannot go on with the manuafcture of component parts until the sample wagon has been approved.

President.—How long would it take you to make the jigs and dies?

Mr. Balfour.—Somewhere about 4 or 5 months.

President.—You can go on with them.

Mr. Balfour.—While we are going on building other wagons, we don't shut down the whole plant whilst manufacturing jigs and dies.

President.—In money what would the loss amount to supposing you don't have any work to do?

Mr. Balfour.—Rs. 4 lakhs in overhead charges. Not to mention the fact that probably if we did actually shut down, we would be shut down for about 6 months and then we may never get the labour back.

President.—Leave out the overhead charges. Supposing you had to keep up your labour force which is the most important thing, your labour charges would come to about Rs. 4 lakhs a year.

Mr. Walker.—Yes.

President.—Supervision is another, say, Rs. 3 lakhs.

Mr. Walker.—Yes.

President.—That would be a dead loss. As regards the other item power and fuel surely you would not lose the whole of that.

Mr. Mather.—There are quite a number of items you would automatically save and of course similarly you would save the interest on working capital.

Mr. Balfour.—How should we employ our labour if we had no wagon work?

President.—What is your total labour force?

Mr. Balfour.—It is about 1,600.

Mr. Mather.—At Asansol.

Mr. Balfour.—Yes. The Railway Board have offered us metre gauge wagons. They said they would call for tenders, but we are not primarily laid out for metre gauge wagons.

Mr. Mather.—For which railway?

Mr. Balfour.—They don't say that.

President.—Is there any difficulty in connection with metre gauge wagons?

Mr. Balfour.—We did metre gauge wagons before. But the difficulty is in getting the low sided wagons for loading the metre gauge wagons after they have been built.

Mr. Mather.—Presumably the Railways have got these low sided wagons.

Mr. Balfour.—Yes.

Mr. Mather.—The presumption is that you will not be able to get these wagons.

President.—Would it mean making new jigs and dies for them?

Mr. Balfour.—Yes.

President.—That would be only for this one order.

Mr. Balfour.—Yes.

President.—We must leave it at that for the present.

Mr. Balfour.—Still it is a point which you must enquire into. The Railway Board would be doing the wagon building industry a great service if they adopt the policy that we suggest.

Dr. Matthai.—What is the policy that you suggest?

Mr. Balfour.—It is that they should give the Indian Standard Wagon Company 600 wagons and Messrs. Burn and Company, Limited, 400 wagons just to carry them over the transitional stage.

Mr. Mather.—That is on the assumption that you will actually complete the existing order by the end of March.

Mr. Balfour.—I don't think that there is any doubt about it. In fact, we have been ahead of our manufacturing programme (Statement handed in).

The exclusion of Continental materials.

President.—On page 234 of the blue book you say "It must be remembered that if this (Continental) source of supply is closed to us by the Railway Board specifying that only British material has to be used, the prices will automati-

cally increase." We have received the replies of the Railway Board. They say that they cannot account for your statement at all.

Mr. Balfour.—I don't think we have made that statement. We said 'if.'

Mr. Mather.—Surely you must have had something in your mind.

Mr. Balfour.—Of course we were afraid lest it might come about.

President.—They have not said that they would insist on British material being used.

Mr. Balfour.—No.

President.—Why make such a statement then?

Mr. Balfour.—So as to bring it to your notice.

President.—That point might arise in another way. You are asking for protection for fittings and forgings. The Hukumchand Electric Steel Works also are asking for the protection of castings and so on. If that is done, it may come about without the Railway Board insisting upon your using British materials.

Mr. Balfour.—Then you have got to add about Rs. 150 to the nett price of the wagon. I have got here a statement which might perhaps interest you showed a big statement).

President.—There are two things. The first is that you will longer be able to use the Continental material. The second thing is that if the protection that you ask for *viz.*, 25 per cent. on fittings and castings is given by how much will your cost be raised?

Mr. Balfour.—First of all you want the difference between the Continental and the British prices.

Mr. Mather.—Secondly, if the import duty on fittings and castings went up to 25 per cent. *ad valorem*, what effect would that have on your costs?

Mr. Balfour.—That would not affect us because we manufacture all our fittings.

President.—But your prices would go up.

Mr. Balfour.—They won't go up.

President.—I beg your pardon.

Mr. Balfour.—We manufacture all our fittings for wagons. Mr. Mather asked me why we were asking for protection.

Mr. Mather.—I did not ask why you were asking for protection. I was saying that if you manufactured all your fittings, even if your assumption about the Railway Board specifying the use of only British materials had had any foundation, it would not affect the cost to you of your fittings as shown in your statement.

Mr. Balfour.—What I am saying is that at the present moment we can import fittings cheaper than we can manufacture them.

Mr. Mathias.—Why are you manufacturing them then?

Mr. Balfour.—In order to cover our overhead costs.

President.—You would be able to charge more for your wagons if fittings were protected than you are able to do now?

Mr. Balfour.—We never looked at it in that way.

President.—If you get a duty on wagons and if you also get a duty on wagon fittings, then it necessarily follows that your tender would go up.

Mr. Balfour.—Not necessarily. It would only put us in a better position against our competitors.

President.—If the duty on fittings went up, your competitors' price would go up and so your price would also go up.

Mr. Balfour.—Our price would not go up. It would put us in a better position to supply cheaper wagons than our competitors.

President.—Then, there is no point in your getting the protection.

Mr. Balfour.—Our price will be cheaper than our competitors'.

President.—You would be as expensive as your competitors.

Dr. Matthai.—They won't raise it to the full extent of the duty in order to get an advantage over the competitors.

President.—If there is a protective duty on castings and fittings?

Mr. Balfour.—It would increase the price of the wagon.

President.—It would enable you to get a higher price. Take the fittings. What happens now? Your competitor is not called upon to pay more. If the duty on fittings is raised, his price will go up and you will charge almost the same price as your competitor does.

Mr. Balfour.—We would not increase our price.

President.—Why wouldn't you?

Mr. Balfour.—Because we are manufacturing them ourselves.

Mr. Mather.—You said that you were manufacturing them at a loss.

Mr. Balfour.—I don't think that it would increase the price very much because the fact is that we can buy all our fittings cheaper than we are manufacturing them.

President.—To-day your competitor buys them at Rs. 100. Then you put a 25 per cent. duty on fittings. The price will come to Rs. 125. To-day you have to supply at Rs. 100. To-morrow when the duty comes into force, your price would go up to Rs. 125. I want to know in that way by how much would the cost of the wagon go up if there was a duty of 25 per cent. on castings and fittings?

Mr. Balfour.—We will give you that. Do you want it in detail?

President.—Give us per wagon, and confine yourself to the present types.

Mr. Walker.—Yes.

Capacity of the Indian Standard Wagon Works.

President.—As regards the capacity of the works, there is one point that you make. You said that you tendered on the basis of 2,000 wagons and that you got only 1,750. Consequently you said you lost in the matter of overhead charges.

Mr. Balfour.—Yes.

President.—What is the difference? You have not told us exactly what you lost.

Mr. Balfour.—About Rs. 133.

President.—How did you work it out?

Mr. Balfour.—We worked it out from our estimates at the time but since we have more recent figures, I think that we could probably work with greater accuracy from these figures.

President.—In order to calculate the overhead charges and the manufacturer's profit, you divided the total by 2,000 but now you have got to divide the total by 1,750, so the incidence per wagon has gone up. Does that apply to your works cost or does it apply only to overhead charges?

Mr. Balfour.—Our wages and material per wagon are just the same.

President.—As regards the estimate of your capacity the Railway Board say that is what they estimate it at for that year. They naturally don't like to run any risks.

Mr. Balfour.—Why didn't they tell us that that was our capacity?

President.—Why should they? Supposing you say that you can manufacture 5,000 wagons; are the Railway Board to accept your estimate as correct? The Railway Board naturally takes the view that you should not get a larger order than what you can execute within a reasonable period. Is it unreasonable for them to do so? You say your capacity is 2,500 wagons and you can raise that to 3,000. Well, we will take it at 2,500, but the Railway Board says no, you can only manufacture 1,750. In a case like that what do you expect this Board to do?

Mr. Balfour.—I think the manufacturers are the best judges of the capacity of their works.

Mr. Mather.—Have you in all previous years executed your deliveries at the promised dates?

Mr. Balfour.—Yes, since the bounty scheme came into operation. In fact we had to slow down our production in the current year. We did not really start working on wagons until about the 1st January. We despatched 50 in February 1925.

President.—We will take the whole year, 1925.

Mr. Walker.—(Hands in a statement). We have bracketed three consecutive months.

President.—If we take the whole year from February to the end of January it comes to 1,600 wagons so that the Railway Board was not far wrong on these figures.

Mr. Walker.—As we say, we had to slow down production so that there would be no hiatus between the orders. Once we got the order for the further 425 wagons there was no necessity to restrict production.

Mr. Mather.—What about the drop here in March, April, May?

Mr. Balfour.—The Railway Board did not place the orders until December.

Mr. Mather.—The Railway Board must bear in mind the date on which the order is placed in estimating your capacity.

Mr. Balfour.—There is no reason why we should not turn out the 1,750 wagons during this financial year.

Mr. Mather.—You mean if you had received the order sufficiently well in advance?

Mr. Balfour.—That is the point.

Mr. Walker.—You will notice that from March 1925 to August 1925 the production averages out to 1,994 wagons in six months. Those were the months when we had overcome all the difficulty about short supplies of fittings from home.

President.—At that rate it would come to 2,000 wagons per year, and you claim 2,500 a year now.

Mr. Walker.—Yes.

Mr. Balfour.—Our workmen have become much more efficient now, whereas we were just starting up then.

President.—Are you working one shift?

Mr. Balfour.—Yes.

President.—Would it be possible to work more than one shift?

Mr. Balfour.—Yes.

President.—Would the output go up in the same proportion?

Mr. Balfour.—No, it won't exactly double itself.

President.—Is the output of 2,500, on the basis of one shift?

Mr. Balfour.—We shall have to work a double shift in the panel shop.

President.—That would give you 2,500?

Mr. Balfour.—If we saw that we could not do 2,500 with that, nothing would prevent us from putting new machines to do the 2,500. I am speaking of the Indian Standard Wagon Company.

Mr. Mathias.—Suppose the orders placed with the other companies were reduced on the ground that they would be unable to deliver.

Mr. Balfour.—I don't know what the Stores Department recommended. We really thought that the Stores had rceommended 2,000.

President.—May I take it that so far as your capacity is concerned it is estimated from time to time by the Stores Department?

Mr. Balfour.—Yes, by their inspection department.

President.—Is it on information supplied by you of your outturn or what?

Mr. Balfour.—They have got responsible inspectors in the works, from whom they obtain progress reports. We quite realize that the Railway Board got frightened because in 1922-23 we were very far behind in our deliveries.

President.—Then there is some justification for the Railway Board being careful?

Mr. Balfour.—It is only by increasing our output that we can get down the price of wagons. We don't want a smaller number of wagons and a large bounty; we would rather have a larger number of wagons and a small bounty.

The Bounty.

President.—Your next complaint is as regards the bounty. You say first of all you don't know what the amount of the bounty is and in the second place you say for that reason you don't know how much protection is required. Well, surely you don't expect us to find out what bounty you require?

Mr. Balfour.—In the agreement for the wagons that we have recently signed—I mean the agreement between the Railway Board and ourselves for the manufacture of these wagons, the bounty is stated. We got the agreement only about ten days ago.

President.—So this statement that you make in your representation is not up to date?

Mr. Balfour.—Quite so.

President.—What is the amount of the bounty?

Mr. Walker.—It varies from wagon to wagon (hands in a statement).

President.—I take it on these figures the bounty is the difference between the lowest British tender and your tender?

Mr. Walker.—We presume so.

President.—On the C-3 the foreign price was Rs. 2,915 and your tender was Rs. 3,250, so that you got a bounty of Rs. 335.

Mr. Balfour.—Yes.

President.—On the A-1 your price was Rs. 3,485 and the foreign tender was Rs. 3,083; there was a bounty of Rs. 402. On Messrs. Burn and Company's A-2 the tendered price was Rs. 3,470 and the foreign price was Rs. 3,194, a bounty of Rs. 276. Messrs. Jessop and Company's price was Rs. 3,573 against Rs. 3,194 and they got a bounty of Rs. 379, that is nearly Rs. 100 more than you did.

Mr. Walker.—Yes.

President.—Are you putting this statement in?

Mr. Walker.—We will send you six copies of this statement to-morrow.

Mr. Balfour.—It is not possible for us to say how they arrive at that bounty. They have made a statement that they paid a total bounty of Rs. 7,41,000. It is very difficult to understand how they arrived at that figure.

President.—You asked for a certain price and you actually got what you asked for on these figures. Is it not enough for your purposes?

Mr. Balfour.—They state that they paid the Indian manufacturers Rs. 7·41 lakhs on these orders whereas the Indian manufacturers could account for about Rs. 5·40 lakhs only. It is very interesting.

President.—Why does the manufacturer wish to know how they spend the bounty so long as he is getting the price that he is asking.

Mr. Balfour.—We don't want Rs. 7 lakhs, if 5 lakhs will suffice.

President.—When you ask for a duty, we will have to estimate the difference between your fair selling price of a completed wagon and the price that is given there, is it not so?

Mr. Balfour.—Yes. But we hope you won't take the price quoted in the lowest tender.

Mr. Mather.—We may consider it too high.

Mr. Walker.—The effect of this bounty being administered in this way is to make the manufacturers quote uneconomic prices for fear of losing the orders.

President.—Why should they give you information which would enable you to quote a higher price? From their point of view it is quite a reasonable plan. If you were buying anything, you would not let your sellers know how much you were prepared to pay, so that they might quote you a higher price.

Mr. Balfour.—No.

Continental fittings.

Dr. Matthai.—Please look at page 234 where you speak of the importation of fittings from the Continent. How long ago did you get these things? I find later on in your statement of castings you give one or two cases of castings that you got from Belgium.

Mr. Balfour.—It was at the end of 1924 or the beginning of 1925 that the rule was issued that the Consulting Engineers to the Government of India, London, would inspect the fittings that we import.

Dr. Matthai.—That was at the end of 1924.

Mr. Balfour.—Yes, that they would inspect the fittings which we import. When they inspect and pass the fittings at home there is no re-inspection out here. Before that time we used to employ our own inspectors. They sent out the fittings and when they came out here they were re-inspected and often rejected. To overcome that, the Government asked their Consulting Engineers to inspect our fittings. That enabled us to go to the Continent.

Dr. Matthai.—Can you give me some kind of general idea how these Continental fittings compare in price with other castings?

Mr. Balfour.—We gave you comparison of prices.

Dr. Matthai.—You gave them for castings, but not for forgings. If you look at page 298, you will see that you have given us two statements one of which is axle-boxes and the other is solebar stiffening brackets. That of course is just representative. You get various other things from the Continent.

Mr. Balfour.—Those are for wagons, but for underframes, we get many additional castings.

Dr. Matthai.—What proportion of the castings that you require for a wagon do you import from the Continent?

Mr. Balfour.—All.

Dr. Matthai.—The Continental price is about 40 per cent. less.

Mr. Walker.—In some cases that is so.

Dr. Matthai.—On an average that would be correct.

Mr. Walker.—We have a statement already prepared (handed in).

Dr. Matthai.—If you put in these two statements they would be useful.

Mr. Walker.—Yes.

Dr. Matthai.—When you made out these cost statements for 1,250 *plus* 425 wagons, that is a total of 1,675 wagons, I suppose you took all the charges above materials and direct labour. What do you call charges, all costs above materials excluding direct labour?

Mr. Walker.—Charges that cannot be debited direct to the order.

Dr. Matthai.—You take all your materials and stores. You take your direct labour. That is one item.

Mr. Balfour.—Yes.

Dr. Matthai.—Everything that goes into the cost above that is charges.

Mr. Balfour.—Yes.

Dr. Matthai.—When you are trying to get your cost, say, for 1,500 wagons, you work out what these charges would amount to with respect to a normal output. All these costs above material are worked out on the basis of your normal output. What I want to know is in the statement that you have pre-

pared for 1,675 wagons, what is the normal output that you have taken into account? Is it 2,000 or 2,500 or any other figure?

Mr. Balfour.—We don't quite follow you.

Dr. Matthai.—I want you to explain with reference to the general statement you make here: "The overhead expenses are distributed by means of an on cost which is the ratio between overhead expenses and the total direct wages of the plant when running at its normal capacity." What is the normal capacity on which you base the whole statement?

Mr. Balfour.—We have been closed for two years nearly and we had no actual figures of on cost. That was an estimated figure.

Dr. Matthai.—That I quite understand. What I want to know is, taking that estimated figure, on what output was that based?

Mr. Balfour.—The estimated figure was more or less based on that of Messrs. Burn and Company, Limited, Howrah.

Dr. Matthai.—On an output of what?

Mr. Balfour.—1,800.

Dr. Matthai.—We raised the point earlier in the discussion. I think the President asked you about the way you arrived at Rs. 133. I am really on the same point. If you take the original statement showing the costs of wagon orders, it will be seen that the total charges amount to Rs. 10 lakhs. The loss on charges amounts to Rs. 7 lakhs. The way I understand it is this. If your normal output is taken as X, then your total charges would be Rs. 10 *plus* Rs. 7 lakhs. Am I right?

Mr. Balfour.—Yes.

Dr. Matthai.—In order to verify your statements here, it is necessary for me to know what precisely is X.

Mr. Walker.—150 wagons a month as far as my memory serves.

Dr. Matthai.—That is 1,800 a year.

Mr. Walker.—Yes, the rate of on cost was calculated at the time when the works had been closed. We considered that. So I asked the wagon builders the capacity of this works when it was running normally. It was then 150 wagons per month. We estimated the total overhead expenses for the whole year and ascertained the ratio between that figure and the total productive wages for 1,800 wagons.

Dr. Matthai.—1,800 is the figure on which your on costs are based.

Mr. Walker.—Quite, and actual practice has proved that we were not very far wrong.

Dr. Matthai.—Have you had any complaint with regard to the steel that you purchased from Tatas?

Mr. Balfour.—There is really no complaint against them.

Mr. Walker.—If we get a bad bar or section, we send it back and Tatas replace it.

Bounty v *duty.*

Dr. Matthai.—You are asking for a duty instead of a bounty. How exactly would you expect us to get over the difficulty arising from various types of wagons? You cannot have various duties on various types of wagons and there is considerable difference between one type and another. You will find very much more in underframes as there is no standardisation. Where you have as many as 15 different types, how exactly would you expect us to do it? What is your suggestion?

Mr. Walker.—Take two types most commonly used in India and strike a mean between the two and fix an *ad valorem* duty.

Mr. Balfour.—We would have to think it over.

Dr. Matthai.—If you take the types most commonly in demand they would be A-2 and C-2.

Mr. Walker.—Under the old Indian Railway Conference Association designs.

Mr. Balfour.—In the new design they have only got two. It will be easier with the new designs.

Dr. Matthai.—You might think that point over and give me a considered statement.

Mr. Balfour.—Yes.

Dr. Matthai.—Just for argument's sake supposing we had a system of bounties for wagons on the lines on which bounties are ordinarily paid in protective legislation, that is, so much per unit of product during a particular year, so that there is no secrecy about it at all, and supposing a reasonable estimate was made of the capacity of the Indian firms and a total amount was budgetted each year to reach the aggregate figure, from your point of view would you have any objection? I am not speaking from the public point of view, but from the point of view of the wagon builders.

Mr. Balfour.—If it is a progressive scale, the amount per unit would decrease.

Dr. Matthai.—That is a detail. I am asking you about this particular method.

Mr. Balfour.—We think it would be quite all right if the amount was sufficient.

Dr. Matthai.—I gather from your statement and those of other wagon builders that the whole difficulty about the bounty has been the gambling element that it introduces in the transactions. You have to quote a price, not with respect to the economic factors of the business, but with reference to certain unknown factors.

Mr. Walker.—We don't think it was exactly a "gamble" so far as we were concerned.

Dr. Matthai.—You try to get the order by quoting as low as possible, not with reference to the known factors in the business, but with reference to unknown factors such as foreign prices.

Mr. Balfour.—Quite.

Dr. Matthai.—From a practical point of view that is the real objection to the system as it has worked so far. Supposing we devised a system by which it was laid down beforehand in each year what the bounty on wagons is going to be, from your point of view there would be no objection.

Mr. Balfour.—I don't think there would be any objection if the amount was sufficient.

Dr. Matthai.—But to the system itself you would have no objection.

Mr. Balfour.—No.

Mr. Mathias.—Beyond a statement or suggestion that you favour protection by means of duties, you have not given us any estimate of what protection you consider is necessary to the industry.

Mr. Balfour.—We are going to send that in.

Mr. Mathias.—From the absence of any statement as to the amount of protection, I am not to deduce that you consider the present system of bounties adequate.

Mr. Balfour.—No, we don't consider the present amount of bounty as adequate because it does not allow for any expansion of the wagon industry in India.

Mr. Mathias.—I should be wrong if I made the deduction that your application was a mere desire that the present system of bounties should be translated into a system of duties, the amount being unchanged.

Mr. Balfour.—You would be wrong.

Mr. Mathias.—Your costs per wagon in 1925 really approximate to the foreign manufacturer's costs.

Mr. Balfour.—We lost about Rs. 133 per wagon.

Mr. Mathias.—I am speaking of the figures that you have now given. They do not appear to be very much out as compared with the foreign manufacturer's costs.

Mr. Balfour.—No.

Mr. Mathias.—That is taking 1,250 and 425 together.

Mr. Balfour.—We received Rs. 4,100 for wagons delivered before 31st March 1925 and Rs. 3,900 for wagons delivered after 31st March 1925.

Mr. Mathias.—I see that you got an order for 1,250 wagons, some of which were made in 1924-25 and then you got an order for 425 wagons in 1925-26.

Mr. Balfour.—That was a separate order. For that we received Rs. 3,800 per wagon.

Mr. Mathias.—I am speaking of your actual costs of manufacture. I am not going into any detail. I want to know whether your costs approximate the foreign producer's costs in 1925-26. You said that there had been very big reductions in the cost of labour.

Mr. Balfour.—There has been no reduction in the cost of labour.

Mr. Mathias.—Your labour is getting more skilled. In this year there will be a big reduction in the cost of labour per wagon, that is to say, you will be producing at lower costs.

Mr. Balfour.—That is so.

Mr. Mathias.—Speaking generally as your tender indicates, you expect to produce at lower costs than previously?

Mr. Balfour.—We hope the costs will be lower.

Mr. Mathias.—What is the general position as regards the company at present? It has not been working at a profit in the past.

Mr. Balfour.—No.

Mr. Mathias.—Since the reorganisation there has been a great improvement, has not there?

Mr. Balfour.—There has been a big improvement since we reopened the Works.

Mr. Mathias.—At present is it working at a satisfactory profit?

Mr. Balfour.—I would not say that. There was satisfactory profit last year, but not this year. It is working on the other hand more efficiently this year.

Mr. Mathias.—Have you got your last year's report?

Mr. Balfour.—Not yet published.

Mr. Mathias.—When will it be issued?

Mr. Balfour.—About the middle of August we hope to get it out.

Mr. Mathias.—Can you let us have a copy of it when it is out?

Mr. Balfour.—Yes.

President.—I think that you had better make a statement of your claim for protection and we will then work out your fair selling price adding profits and everything. You must tell us how much you claim. At present we do not know what you claim.

Mr. Balfour.—Yes.

Mr. Mather.—On page 234 under the cross heading "The Indian Standard Wagon Company, Limited," you say "they intend to spend a further Rs. 1,00,000 approximately in 1926-27 on additional machinery. The Indian Standard Wagon Company, Limited, can now build 2,500 wagons per year." Is that 2,500 your capacity before this extra lakh is spent?

Mr. Balfour.—No, 2,000.

Mr. Mather.—The extra lakh would bring you to 2,500. Have you actually spent any?

Mr. Balfour.—Partly. We have a new planing machine, several drilling machines, etc. At present, we have a 12-spindle knee drilling machine on order. If the high capacity drill that we are installing in Howrah with 48 spindles is successful, we intend to put down a similar one in Asansol.

Mr. Mather.—What time would it take to organise the whole thing?

Mr. Balfour.—It is only a question of putting down the plant. It won't take long to get the labour accustomed to the new machinery. The expense will be only in jigs. At the present time we are drilling single holes, but we hope to do many holes in one operation.

Mr. Mather.—We may take it that by the end of the current official year your block expenditure would be a lakh of rupees higher than will be shown in the statement which you are preparing up to 1925-26?

Mr. Balfour.—Fully that.

Mr. Mather.—By that time you would have increased your capacity to 2,500 wagons.

Mr. Balfour.—Yes.

Method of protection.

President.—Before passing on to fabricated steel, I should like to ask you a few more questions about the method of protection that you are suggesting. Now there are four manufacturers of wagons in the country. Really speaking there are only three because Messrs. Burn and Company, Limited, and the Indian Standard Wagon Company may be treated as one for all practical purposes.

Mr. Balfour.—They are two distinct companies run by the same people.

President.—The point is that when you send tenders, you send them for both. One does not compete against the other. There are only three competing concerns, is not that so?

Mr. Balfour.—That is so, but we try if possible to give open goods wagons to the Indian Standard Wagon Company and covered wagons to Messrs. Burn and Company, Limited.

President.—There are only three companies, one of which is very new, I mean the Peninsular Locomotive Company.

Mr. Balfour.—It is about as old as the Indian Standard Wagon Company.

President.—But, they only started last year. Supposing tenders were invited in this country for a certain number of wagons or for the whole number, there may not be much competition between these companies.

Mr. Balfour.—I don't know.

President.—The Railway Companies may have to pay more for their wagons.

Mr. Balfour.—I don't think that that is correct.

President.—Why not?

Mr. Balfour.—Just look at our last quotation.

President.—That was under the system of bounties. But when you know that no wagons can come out at all because of the duty. . . . . .

Mr. Balfour.—Your idea is that we would put our heads together and keep up the price.

President.—That is not my idea at all. It is one of the things that we have to consider. When you know that the railways cannot get their wagons from outside except by paying higher prices, you may naturally put up your prices right up to the full level of the duty. You may not compete very much as between yourselves because there are only three companies.

Mr. Balfour.—There will always be the comparison with the home prices.

President.—How could that help after the Legislature had already fixed the duties? Even after the comparison what can the Railways do?

Mr. Balfour.—We see your point. But we don't think that it would arise. It would certainly not arise from our firm.

Dr. Matthai.—Why not?

Mr. Balfour.—Because we have never done a thing like that.

Dr. Matthai.—You never had the opportunity.

Mr. Balfour.—We don't suppose so. We never had the opportunity and we never considered it.

President.—This is not my idea. This is one of the points that is likely to be urged; in fact, it has already been urged.

Mr. Balfour.—Last time we suggested a certain number of wagons should be allotted to the Indian manufacturers.

Dr. Matthai.—If there is competition in India, there can be real competition only between you on the one side and Messrs. Jessop and Company on the other. The Peninsular Locomotive Company is new to the business and has a small output at present. Your two companies can produce more than two-thirds of the total consumption in India. Even if you don't come to some kind of arrangement, you would be in a very strong position with regard to the determination of prices.

Mr. Balfour.—If we are in a strong position, your contention is that we would take advantage of it.

Dr. Matthai.—As business people, that is a legitimate assumption.

Mr. Balfour.—We don't think we have ever done it up to date.

President.—As regards tenders one of two things may be done. First of all we assume that the tender of the Indian Standard Wagon Company is the lowest, and it gets the order for the number of wagons that it can manufacture. As regards the rest, would you suggest that the Railway Company should be compelled to give the order for the remainder of the wagons to the next lowest tender and so on or do you suggest that they should be offered an order at your rate and if they did not take it, then the Railways should go abroad.

Mr. Balfour.—We don't follow you.

President.—Supposing the total demand for wagons in the country is 7,000 altogether. We say that an order for 5,000 wagons should be placed in India. Your tender is the lowest. We will say that it is Rs. 3,000, the next being Rs. 3,500 and next one Rs. 4,000. You get 2,500 wagons. Then, the Railway Companies can either give orders for the remaining 2,500 wagons to those companies at the rate at which they have tendered or they can say "are you prepared to accept an order at the same rate as the Indian Standard Wagon Company at Rs. 3,000. If you don't, then that order will go abroad?"

Mr. Balfour.—They must come into line with the Indian Standard Wagon Company. They must bring their plant up to the same state of efficiency that we have achieved.

President.—Is it feasible?

Mr. Balfour.—It is quite feasible.

President.—What may happen is that they may have to go out. All the three plants are not in the same state of efficiency at present. Under the bounty system, they get a certain number of orders; in the other case, if they don't accept orders at your rate, they have to go out.

Mr. Balfour.—It is the same thing all over the world. If you don't bring your plant to the same state of efficiency as that of your competitor, you have got to go to the wall.

President.—If they go out, you get the whole field to yourselves.

Mr. Balfour.—We don't want the field. For that matter I would certainly object to any firm getting more than we got simply because they are not so efficient. It should operate the other way.

President.—The position is, that if time is not given to other companies which are behind you to come up to your standard, then there is a risk that

these companies may get wiped out and when they are wiped out you remain in the field, unless of course somebody else starts a new company.

Mr. Balfour.—Why not put it the other way: Instead of quoting a low competitive figure we might have put in a high figure, but we do not want any unreasonable profit.

President.—I am just trying to point out from the point of view of the country what would happen in a case like that.

Mr. Balfour.—We don't see how you can give them more than you give us.

President.—Under the system of bounties this can be done.

Mr. Balfour.—Yes. As I told you this morning, we act as managing agents, as managers and as foremen for the Indian Standard Wagon Company, hence the greater efficiency of the Company.

President.—What is the procedure you suggest? Do you suggest that orders for a certain number of wagons should be placed in this country only or do you suggest that all the tenders for wagons should be in rupees?

Mr. Balfour.—Orders for a certain number of wagons should be placed with the Indian manufacturers with Indian competition only. That is the best proposition, I think.

President.—But then this other factor comes in.

Mr. Balfour.—Would it not be up to the other firms to get their plant up to a higher efficiency as soon as possible?

Dr. Matthai.—Supposing we put a duty of 25 per cent. on wagons, and other people imported in spite of the duty, what would you suggest? Supposing a definite number of wagons were placed out here, either you quote up to the full extent of the duty, in which case you really get more than you want on the basis of normal profit or you do not quote to the full extent of the duty and in that case other people who are making wagons here will be left out?

Mr. Balfour.—Are you not going to make the other people come up to the same standard of efficiency that we have attained. We have had a tremendous struggle with the Indian Standard Wagon Company to bring it up to the present standard. In fact we had to give them a loan of Rs. 12 lakhs to carry on.

President.—For purposes of discussion supposing you got your order for Rs. 3,000, and the others got an order for Rs. 3,500, it is possible that for the time being the country will be paying Rs. 500 more per wagon. But when you see they are getting Rs. 500 more, you will say "we will make 5,000 wagons," so that eventually they go out and you get the whole market.

Mr. Balfour.—We think that will never occur. If these people could not bring their plant up to a state of efficiency to compete with us, you will find two or three new companies started here. Let them go to the wall and let other people more efficient come in. If you put on a duty sufficient to guarantee the Indian manufacturer an adequate number of wagons other people will be attracted, but I would certainly object to anyone getting more than we are paid for the same work. That would be a reflection on our business capacity. There is only one company which is new, but what about the other company which has been in the field for 20 years longer than the Indian Standard Wagon Company?

President.—I take it that the gist of your reply is this, that orders for a certain number of wagons should be placed in the country and the orders must be placed at the lowest Indian competitive tender.

Mr. Balfour.—Yes, otherwise you will find the prices soaring up.

Mr. Mather.—As you know, protection can only be given to any industry on the assumption that within a reasonable time the industry will be able to carry on its business in India without protection. You don't appear to have dealt in any way with that point. There is nothing in your arguments to suggest that some time in the future you will be able to manage without protection.

Mr. Balfour.—What do you mean exactly by " doing without protection "? Do you think we can do without protection if you tax our raw material?

Mr. Mather.—In considering a question like that, you might assume that if you were handicapped by protective duties on your materials, you would be given a compensating protection to that extent, but are you able to give us any indication as to the period within which you expect to be able to put wagons on the market in India at competitive prices provided your compensation is only sufficient to cover any protective duties on steel?

Mr. Balfour.—We think we will.

Mr. Mather.—At what period?

Mr. Balfour.—We think from 5 to 8 years.

Dr. Matthai.—So long as that?

Mr. Balfour.—We are not very far off it now. We are getting down to Home prices, but it is very difficult to give you a specific date.

Mr. Mather.—It is an essential part of any claim for protection that it will be possible within a reasonable period to do away with protection.

Mr. Balfour.—The best answer to that is a comparison of the prices now and prices before the bounty scheme came into operation, and we think we are fulfilling the conditions laid down by the Fiscal Commission.

Mr. Mathias.—Your contention is that the period depends on whether you are fully working on 2,500 wagons a year which will bring down your overhead charges and enable you to produce at a low rate?

Mr. Balfour.—That is so.

Mr. Mathias.—That is to say within the next three or four years, with a compensating protection for the duty on steel, you will be able to produce at competitive prices?

Mr. Balfour.—Yes. Of course Tatas have been very good to us. They have always given us concessions on the price of wagon material.

Dr. Matthai.—As far as the Indian Standard Wagon Company is concerned, if you got an order next year for 3,000 wagons and laid down this extra plant you would require no protection at all? The way in which your overhead is coming down in proportion to your output rather suggests that if you got a larger order you would require no protection. It is really a question of protection or output.

Mr. Balfour.—We don't think we shall ever be able to do without the compensating protection.

Dr. Matthai.—I am speaking of substantive protection.

Mr. Mather.—You don't appear to have looked into that part of the case.

Mr. Balfour.—We have, but it is a very difficult point to determine. (But see the statement of claim furnished later.)

Mr. Mathias.—You cannot tell us because you do not know what the protective tariffs on Tatas steel may be?

Mr. Balfour.—That is so. We are really in the Board's hands.

Mr. Mather.—You are satisfied, are you not, that if you are able to get orders in the intervening years, you would be able within a few years to make wagons without any substantive protection?

Mr. Balfour.—We are quite sure we shall be able to make considerable reductions if we get large orders because this will encourage us to design and procure machinery which will cut costs as much as possible, although we don't think we will ever bring the labour costs down.

Mr. Mather.—In what way are machines going to cut your costs if you cannot reduce the labour costs?

Mr. Balfour.—I am talking of the machine labour. If you put down a drill having 12 spindles it is going to save at least half the time taken in drilling by a single spindle.

President.—I think it would be better if you could give us an estimate as to how your costs will come down if you had an order for 2,000, 2,500 and 3,000 wagons.

Mr. Balfour.—It won't go down on 2,000 wagons.

President.—Make an estimate on 2,000, then say what would be the cost if you had 2,500 and then 3,000 wagons. What we call overhead we can calculate ourselves, but you can calculate the materials and other things.

Mr. Balfour.—We will do it for you.

Wagons, underframes, castings and spare parts.

President.—You have given a list in your enclosure 3 of the forgings. These are practically all the forgings that you require?

Mr. Balfour.—Yes.

President.—Are there any more?

Mr. Balfour.—That is a complete list.

President.—Do you claim that you make them all?

Mr. Balfour.—Yes, everything.

President.—The Railway Board have given replies which suggest that everything cannot be done.

Mr. Balfour.—We may say that we are importing screw couplings for these wagons because our cost is Rs. 28-13-0 and you can buy them to-day at Rs. 23 landed. That is the reason why we are importing them. Then again, we manufacture bearing springs and diagonals. There is not a forging on the wagon that we cannot make.

President.—The Railway Board say that the wagon-building firms import the components in which they mention buffers, screw couplings, draw and buffer springs.

Mr. Balfour.—We can manufacture them all save steel castings.

President.—Bolts, nuts and rivets?

Mr. Balfour.—We can make them but it does not pay us.

President.—Rivets, you can't make. You must import them in any case.

Mr. Balfour.—Yes, but we could manufacture them.

President.—Do you make bearing springs?

Mr. Balfour.—We make all the springs.

President.—Do you make diagonals?

Mr. Balfour.—Yes.

President.—You don't agree with the opinion of the Railway Board on that point.

Mr. Balfour.—As I say we must have made something like 20,000 or 50,000 screw couplings. This is the first order for which we have imported screw couplings.

President.—In all these cases you have given your costs of drawbar hooks and brake beams.

Mr. Balfour.—We are importing brake beams for these wagons.

Mr. Mather.—You have actually manufactured them.

Mr. Balfour.—Yes.

President.—So far as the material is concerned, we can see what the prices are, but, now do you allocate the charges on small things? Take the case of drawbar hooks. The total cost of the material is Rs. 14-12-9 and your labour charge is Rs. 7-4-6 and other charges Rs. 18-5-9. That is a fairly high percentage.

Mr. Balfour.—We don't think we have got the details here.

Mr. Mather.—Drawbar hooks get a lot of preliminary forging.

Mr. Balfour.—That is a very small charge—200 per cent. on direct labour. That has got to cover all dies.

Dr. Matthai.—In estimating your charges here what you apparently do is to take a certain percentage of material and certain percentage of labour.

Mr. Balfour.—We have 7 per cent. establishment on cost on material and wages. A fuel charge has also to be added.

President.—Take the next one 2 brake beams complete. There the total material is Rs. 20-10-10. Labour is the same as in the drawbar hook, charges are Rs. 16-7-7.

Mr. Balfour.—There is not so much forging work on that. Probably there will be a little more fitting. In the fitting shop there is a 100 per cent. on cost. We cannot take a flat rate of on cost over the whole works. If we did that and arrived at 100 per cent. on direct labour, the result would be that we would be full of forging and machine work. Our machine shop and the smithy on cost would be too low and we would be cramped with orders. The overhead charge depends a great deal on the capital expenditure on the plant.

President.—In both cases on your steel I take it you are paying Rs. 30 a ton.

Mr. Balfour.—If you get the cost sheet of an underframe, you will probably find the explanation there. It depends a great deal on the block value of the department.

President.—How can you get the block value in a thing like a drawbar hook?

Mr. Balfour.—We have the overhead expense of each shop in a separate account. For example, erection department has got a different account to the machine shop.

President.—It is very difficult for us to say what ought to be your reasonable cost above material. That is the difficulty.

Mr. Balfour.—I have just given you the overhead. We can probably give you more detailed information if you care.

President.—Would it be substantially correct if we did this? We cannot really go into all these small cases?

Mr. Balfour.—It is difficult, I admit.

President.—Supposing we come to the conclusion that you require a certain amount of protection on the wagons. We have got some figures by which we can say such and such an amount of protection might enable you to get on. Supposing we found that figure, would it not be simpler to apply the same figure to fittings? You are asking for different duties on different kinds. To-day there is a uniform duty of 10 per cent. *ad valorem* on the wagons and on the component parts. Why should we not act on the same principle whatever the duty or bounty may be. Why should we make any distinction especially as we have no figures to go on?

Mr. Balfour.—I think it would be correct.

Mr. Mather.—Whatever figure is generally suitable for wagons would be approximately suitable for forgings.

Mr. Balfour.—I believe it would.

President.—It ought to work out in the same way. Even if we took 101 different things, they must bear some relation to the total cost of the wagon surely. We cannot really go into the cost of each individual part.

Mr. Mathias.—I suppose if this proposal which has been just put before you by the President, was accepted, what you would do would be to specialise on those particular parts which you could turn out more profitably and the others you would import.

Mr. Balfour.—We could not very well do that. We have got to think more of the output of wagons to keep our department going as a whole.

Mr. Mathias.—In order to reduce your overhead charges, you would continue to manufacture a certain number of spare parts even though strictly speaking they were not profitable.

Mr. Balfour.—Yes. It tends to reduce the overhead charges.

Mr. Mathias.—Supposing that the imported fittings were so cheap that it was not really worth your while to manufacture these fittings, could you turn this machinery to any other use?

Mr. Balfour.—Not unless orders were going for spare parts.

Mr. Mathias.—Supposing you had no orders, could you utilise the machinery for any engineering work?

Mr. Balfour.—Drop stamps are not used for general engineering. You must have a large number of items to manufacture before drop stamps are economical. Your dies on an average would cost you Rs. 500 before you start manufacture. If you get orders for 500 forgings, it becomes a proposition whether it is worth your while making dies and drop stamping the item rather than hand forging it.

Mr. Mather.—We saw the other day in your Asansol Works the machinery for making drawbar hooks and you have given us a cost for manufacture at Howrah. Are your requirements so large as to justify your having two plants to make them?

Mr. Balfour.—That stamp is not used solely for drawbar hooks.

Mr. Mather.—Quite. In a normal year would the two drop stamps be fully occupied?

Mr. Balfour.—Unless we get 2,500 wagons at Asansol, we have surplus drop stamps there.

Mr. Mather.—Therefore these figures probably contain the loss on charges, because the machine was not fully occupied. As you got more regular orders for drawbar hooks, your overhead charges would come down.

Mr. Balfour.—Yes.

Mr. Mather.—We would not necessarily need to take these as typical of what your charges would be as a permanency if you were making them in large numbers regularly.

Mr. Balfour.—The surplus drop stamps at Asansol do not inflate the cost very much. It hardly affects the total overhead charges.

President.—What is the weight of the total quantity of forgings in an A-2 wagon.

Mr. Balfour.—I think we gave you that last time.

President.—You go on changing your types.

Mr. Balfour.—There is very little difference in forging. Forgings for both the wagons are the same.

President.—You have got the fittings. You have not got the forgings separately.

Mr. Balfour.—No.

President.—I want to find out whether this forms a reasonable percentage of the total quantity of steel used. If it is say a quarter or one-third of the steel used, then we can more or less say that it may be reasonable to suppose that the cost of making these forgings was on the whole the average cost of the wagon.

Mr. Balfour.—The total weight of castings on A-2 and C-2.

Dr. Matthai.—You don't import any forgings.

Mr. Balfour.—We are importing couplings on this order, but we can manufacture them.

Mr. Mathias.—Is it simply because of the overhead charges that you continue to manufacture them when you can import them cheaper?

Mr. Balfour.—Yes, but when the difference becomes so great as in the case of screw couplings, we purchase from home. The point is, that we have actually got the whole machinery, both at Howrah and Asansol, to manufacture every part in a wagon with the exception of cast steel fittings.

Dr. Matthai.—For all your forgings you get your steel from Tatas.

Mr. Balfour.—Yes, with the exception of one and that is the spring buckle. I spoke to Mr. Mather about it. When he recommended the use of Tatas steel for various forgings, he missed this item which gave us considerable trouble.

Dr. Matthai.—What sort of steel do you want?

Mr. Balfour.—It is specified as Grade A iron. The Railway Board have accepted Tatas special soft steel in place of Grade A iron.

President.—I just want to point out that the Railway Board do not accept that statement in so many words. What they say is that Tatas special soft steel has been approved by the Railway Board as a substitute for Grade A iron. This is what they say: "In certain individual instances the Railway Board have permitted the substitution of Tata's special soft steel for Grade A iron where the latter is specified in the specification for wagons; they have not as yet generally approved the substitution."

Dr. Matthai.—How did you get this impression?

Mr. Balfour.—Mr. Mather could tell you.

Mr. Mather.—The question came up a few years ago—I forget the precise year—whether Tata's special soft steel would be a satisfactory substitute for wrought iron portions of a wagon. So far as the components of the wagon which were referred to me were concerned—other people were consulted as well—I said that Tata's special soft steel would be a satisfactory substitute for wrought iron. So far as I know that recommendation was accepted. The spring buckle which Mr. Balfour mentions now was not in the list of components which were under consideration at that time and I think that that possibly accounts for its omission. Whether there are any other omissions or not I do not know. I was merely concerned with the components in the list actually sent to me at that time.

Mr. Mathias.—Can you tell me why so many firms have taken to manufacturing wagon fittings. It is not only the Indian Standard Wagon Company that does so. Take the case of Messrs. Burn and Company, Limited. They have general engineering work, still they manufacture wagon fittings.

Mr. Balfour.—Messrs. Burn and Company, Limited, have been manufacturing wagon parts for the past 20 years.

Mr. Mathias.—Take the case of Angus Engineering Works.

Mr. Balfour.—They have not put down drop stamps to make wagon fittings.

Mr. Mathias.—Why do they make them?

Mr. Balfour.—They cannot get anything else. Their drop stamps have put down for the manufacture of jute machinery.

Mr. Mathias.—Supposing there was a big demand for jute machinery, would it be possible for you to turn your drop stamps on to jute machinery?

Mr. Balfour.—I don't think that there would be sufficient jute machinery fittings to go round. Angus were laid out for the manufacture of jute machinery but I think they are the only other firm doing wagon fittings.

Mr Mathias.—The railways manufacture wagon fittings.

Mr. Balfour.—Yes.

Dr. Matthai.—You don't buy any small forgings from Angus?

Mr. Balfour.—We don't buy anything from them. We have got to sell fittings ourselves.

Dr. Matthai.—Please look at page 245 of the blue book where you speak about comparative costs. Could you give us corresponding information on the basis on which you calculated your costs for 1923?

Mr. Balfour.—We shall send you a statement.

President.—You don't apparently seem to have had a very good experience of Hukumchand's castings.

Mr. Balfour.—I am afraid not.

President.—I think that your main difficulty was to obtain delivery in time.

Mr. Balfour.—That is so.

President.—You had no other complaint against them.

Mr. Balfour.—The castings were very rough and more difficult to machine than home castings.

President.—Is that a defect in the manufacture of castings or what is it?

Mr. Balfour.—It must be a defect in the manufacture of castings. We cannot run our machine at the same speed as we can when machining home castings.

President.—What is it due to do you think? What is the cause of it?

Mr. Balfour.—I think that it is due to sand.

President.—What do you mean?

Mr. Balfour.—It is due to the moulding sand.

President.—Is that not suitable?

Mr. Balfour.—I have no experience in it. When we get a rough casting in iron, we go and look at our sand.

President.—What do you find?

Mr. Balfour.—We find the sand is burnt and that fresh melted sand is required.

President.—Is it due to the chemical property of the sand or is it due to want of cleaning the sand?

Mr. Balfour.—I have really no experience in steel casting.

President.—It is a very important matter whether castings can or cannot be manufactured in India.

Mr. Balfour.—We don't see why they cannot be manufactured in India.

President.—These people claim that they can. You say this is your experience.

Mr. Balfour.—We can only give our experience. We take a good number of castings for general engineering purposes from Hukumchand's. We machine practically all their castings.

President.—They have no machining appliances. When you machine them do you get a rebate?

Mr. Balfour.—That is for Hukumchand's outside orders. We generally machine all their castings.

President.—You get paid for it.

Mr. Balfour.—Oh, yes.

President.—What is your complaint? When you bought castings I understood them to say that they allowed you so much for machining.

Mr. Balfour.—That is so.

President.—If they allow you so much for machining, what is your complaint?

Mr. Balfour.—I say that their castings are rough in comparison with home or Continental castings.

President.—Does that interfere with the use of the castings or does it affect only the appearance?

Mr. Balfour.—It is only the appearance that it affects. But we take a longer time in machining Hukumchand's castings than we do in machining home or Continental castings.

Mr. Mather.—Therefore it actually costs you more?

Mr. Balfour.—A little more. I don't think that the castings are bad.

Dr. Matthai.—Since you do a lot of machining for them you have a great deal of experience of their castings.

Mr. Balfour.—Yes. It does not mean that their castings are bad.

Dr. Matthai.—A rough casting is not a bad casting.

Mr. Balfour.—Not necessarily.

Dr. Matthai.—Why not?

Mr. Balfour.—It can be used. It is only the appearance that is against it.

Mr. Mathias.—I suppose it is difficult to fit in if it is rough.

Mr. Balfour.—Not after it has been machined.

Dr. Matthai.—If on a class of casting you have to do much more machining than you have to do in the case of other castings, to that extent that casting is an inferior casting.

Mr. Balfour.—It takes longer and requires more experience to machine, hence its cost is increased.

President.—To the question of experience we will come presently. I am talking of the suitability of the casting. I want to know whether apart from the question of appearance they can be used.

Mr. Balfour.—The casting is quite suitable.

President.—Does the roughness affect the life of the castings?

Mr. Balfour.—The life of the casting won't be affected.

President.—It is really a matter of improving the finish.

Mr. Balfour.—It is a question of experience.

President.—I see from about 1925 you have taken to Continental castings because they were cheaper than the British and Hukumchand's castings. Hukumchand's also contend like Tata's that it is due to the depreciated exchange on the Continent that these castings are sold at uneconomic prices. Supposing protection was given, Continental castings would carry a heavier duty than other castings.

Mr. Balfour.—That is so.

President.—Just as there is a difference between British steel and Continental steel, is there any difference between the Continental casting and the British casting in quality? What I mean is this that for British steel you may probably pay a little more than for Continental steel. Would you do the same in regard to British casting as you do in regard to British rolled steel?

Mr. Balfour.—No.

President.—Why, is the quality the same?

Mr. Balfour.—I think the quality is the same. The appearance of the British casting is superior to that of the Continental casting.

President.—For that reason there may be a little difference in price.

Mr. Balfour.—We would not be prepared to pay a higher price.

President.—You won't pay anything more?

Mr. Balfour.—If it is good enough to pass Messrs. Rendel Palmer and Tritton's inspection, it is good enough for our use.

Dr. Matthai.—Do you ever have to do any machining on Continental castings which you don't have to do in regard to British castings?

Mr. Balfour.—All castings must be machined.

Dr. Matthai.—In both cases?

Mr. Balfour.—In all cases.

President.—On page 297 you give the price of a set of British axle boxes as £8-1-6 and on page 298 you give the Continental price as £5-12-6.

Mr. Balfour.—These were actual prices ruling at the time when tenders for these wagons were called for. We asked for both British and Continental prices.

Mr. Mather.—The Continental figure of £5-12-6 is for a year later than the British figure of £8-1-6.

President.—I think that the British prices have not changed very much.

Mr. Balfour.—No. That was one of the reasons why we were able to quote such a low price last year.

President.—Are the Continental axle boxes durable?

Mr. Balfour.—Yes.

President.—The difference between the two is roughly £2-10-0.

Mr. Balfour.—Yes. The solebar stiffener is a rough casting. It is very light and requires no machining.

Dr. Matthai.—What would have been the price of Hukumchand's?

Mr. Balfour.—We asked for their quotation for solebar stiffers and their price would have increased the cost of the wagon by about Rs. 14.

Dr. Matthai.—Against £5-12-6.

Mr. Balfour.—No.

Dr. Matthai.—You say that the Hukumchand's price of stiffening brackets is Rs. 3-12-0 each as against the import price of Rs. 2-9-6. That generally is the proportion between the Continental price and Hukumchand's price, am I right?

Mr. Balfour.—Yes. On page 295 we say " In the spring of 1925 we obtained an emergency supply of over 2,000 solebar stiffening brackets from them; we were importing these brackets at Rs. 2-9-6 each landed, but Hukumchand's price was Rs. 3-12-0."

Dr. Matthai.—This £2-9-0 is the British price, not the Continental price. The example you give of solebar stiffening brackets is British and therefore I get the impression that these also are probably British prices.

Mr. Balfour.—I cannot tell you offhand.

Dr. Matthai.—Can you look that up and let me know?

Mr. Balfour.—Yes.

Dr. Matthai.—How long ago was it that you thought of investigating into the possibility of starting a steel foundry?

Mr. Balfour.—In 1924.

Dr. Matthai.—But you thought it was not worth while?

Mr. Balfour.—No, not even with the cheap electricity the Indian Iron and Steel Company offered us.

Dr. Matthai.—What exactly is this process they employ at Ajmer?

Mr. Balfour.—They import hematite pig iron from Home and blow air through it to remove the impurities.

Dr. Matthai.—You say Messrs. Hukumchands did not even ask to be given an opportunity to quote. What do you mean?

Mr. Balfour.—We mean that as we do so much work for Hukumchand's their representative comes to our works at least twice a week; he knows we have got orders for wagons, but he never asks us for orders for fittings.

Dr. Matthai.—They say they do.

Mr. Balfour.—He has never come to me or asked me to be allowed to quote.

Dr. Matthai.—What is the total weight of steel castings in a C-2 wagon?

Mr. Balfour.—1¼ tons for a carriage underframe and 5½ cwts. for a wagon.

Dr. Matthai.—Is it practically the same for all types of wagons?

Mr. Balfour.—Yes.

Dr. Matthai.—If you take the wagons that you have been building since August 1924, what proportion of the steel castings did you import from the Continent?

Mr. Balfour.—I should say 75 per cent.

Dr. Matthai.—Did you import from the continent before 1926? What I want to know is, when exactly did the Continental steel castings become so cheap as they are now apparently? I have not been able to trace any information. These statements that you give rather suggest that you started importing on a considerable scale in 1926. All the importations of 1925 are from England. If you could kindly look up the point and tell me when you started importing castings on a large scale from the Continent, it would be helpful.

Mr. Balfour.—We will give you that.

Fabricated Steel.

President.—As regards fabricated steel, in our first enquiry we recommended a duty of 25 per cent. *ad valorem*. That was accepted by Government and the Legislature. Then we made a supplementary recommendation in November 1924; that recommendation was not accepted, and the last recommendation was made by the Board last September; that too was not accepted.

Mr. Balfour.—That is so.

President.—You mention the grounds on which no supplementary protection was given. Why should you have got it? What is your main contention?

Mr. Balfour.—I think that is all given in your report—drop in the price of steel and rise in exchange.

President.—Your point is this, is it not, that once protection was granted after the first enquiry, when prices went down and exchange rose, it was necessary that the protection granted should have been increased? Is that your contention?

Mr. Balfour.—Yes, and of course the lack of orders.

President.—As regards lack of orders you have not been able to show that you really lost any?

Mr. Balfour.—We have given one or two instances.

President.—These are instances in markets which may not be really regarded as your natural markets.

Mr. Balfour.—The North-Western Railway is our natural market.

President.—In that way every market is your natural market!

Mr. Balfour.—But Calcutta to Lahore is as near as Karachi is to Lahore.

President.—They take the material on their own line from Karachi.

Mr. Balfour.—Why should that operate against us when the railways are State Railways?

President.—Each railway has its own separate organization.

Mr. Mather.—If you got an order for this kind of material for the North-Western Railway would it be carried from Howrah at railway material rates?

Mr. Balfour.—Yes. We have and we always do manufacture for the North-Western Railway. One of our biggest orders which we had in 1924 and completed about August 1925 was for the Sulemanki bridge on the North-Western Railway.

President.—If you had been able to give us some instances in which you had lost orders in Calcutta or thereabouts that would have been very helpful.

Mr. Balfour.—It is very difficult because a lot of these railways in and round Calcutta have not called for tenders at Home for a number of spans. They call in India only.

President.—All the orders that you seem to have lost were within these three years?

Mr. Balfour.—We lost any number but it is difficult to say where they have gone.

Mr. Mather.—Do you know for certain that they were not ordered from anybody else in India? There are other engineering firms competing with you here.

Mr. Balfour.—Take the Wagon shop remodelling at Perambur which is a very big job running over Rs. 5 lakhs: that went to Messrs. Dorman Long. The Assam Bengal Railway order for paint and upholstry shop at Pahartali, worth over Rs. 3¼ lakhs, that went Home.

President.—What we would like to know is this. Can you give us figures to show that previous to 1924-25 you did a lot of fabrication and that owing to your not having got supplementary protection orders went abroad? It is no good making a general statement, that you cannot get any orders.

Mr. Balfour.—It takes us generally six months to put a bridge job through. You say up to 1924-25?

President.—In 1924 you got protection. Can you show that the tonnage has decreased since then?

Mr. Balfour.—We can know that for the last 4 months we have no work at all.

President.—I mean a comparison between the amount of work you were doing in 1924 and what you are doing now. You can take a year or two before if you like, say 1922-23. On page 238 of the representation you say: "The Government in 1926 admitted that the industry was getting Rs. 21 a ton less protection than was intended by the legislature, and expected by the manufacturers....." Where do you get that from?

Mr. Balfour.—I think that was in Sir Charles Innes' speech.

President.—At page 239 you complain that one of the firms in India is in alliance with a Home firm and for that reason "is also to underquote even when Messrs. Tatas have offered Indian manufacturers prices below the Home price of steel." Are you prepared to give the name of the firm?

Mr. Balfour.—Braithwaite and Company.

President.—What is the name of the Home firm?

Mr. Balfour.—We understand it is Dorman Long. We have no definite proof that it is so.

Mr. Mather.—Do they manufacture in India?

Mr. Balfour.—They have put their shops down in Kidderpore.

Mr. Mather.—They have underquoted in competition with you in the Calcutta area.

Mr. Balfour.—Considerably. In fact it was so bad that we very seriously considered taking up offers which we had and forming a close alliance with the home people.

President.—There is only one firm here and that has asked for protection. It cannot give anybody any help.

Mr. Mather.—You say Tata's have offered you much below the Home price.

Mr. Balfour.—Even then we could not compete. What they offered was Rs. 5 a ton less than the basis price.

Mr. Mather.—How much did they get from the Home manufacturers?

Mr. Balfour.—I cannot say.

President.—Is there much competition from the Continent in fabricated steel as far as you know?

Mr. Balfour.—We don't think so. We think the railways insist on British steel for bridges.

President.—I think they can get the British Standard Specification steel from the Continent.

Mr Balfour.—Yes, but I suppose they feel frightened that they cannot get all steel to British Standard Specification.

Mr. Mather.—In saying that the Railway Board insist on British steel for bridges, you don't mean by that they rule out Indian steel.

Mr. Balfour.—No.

President.—I come to the manner in which you have worked out the additional protection that you want at page 251 of the Blue Book. You take for your fabrication Rs. 117 and for the British fabrication Rs. 90. Both these figures are not actual figures. The whole of this argument proceeds on the assumption that these figures are correct.

Mr. Balfour.—They could not possibly be far out.

President.—One reason that makes us think that they cannot be far out is that all the engineering firms have accepted them. But it doesn't show that they might not be too high.

Mr. Balfour.—But I don't think that in any instance there has been a huge difference between Indian tenders and those received from Europe.

President.—You give Rs. 80 in September 1925 and Rs. 72-5 in April 1926 for fabrication. In what way do you make that reduction?

Mr. Balfour.—We know that prices have fallen at home and also wages.

Mr. Mather.—Since September?

Mr. Balfour.—Yes.

Mr. Mather.—That is doubtful.

President.—We would like to have some evidence on the point that there has been a drop in wages.

Mr. Balfour.—It is very difficult to furnish such evidence.

President.—How can we assume that between September 1925 and April 1926 there has been a drop?

Mr. Balfour.—You will find that on the same basis we have come down in our fabrication cost.

President.—The cost has come down, because the exchange has risen and the price of coal has come down.

Mr. Balfour.—That is one of the reasons for the decrease in the fabrication cost.

President.—I am talking of your cost. Here you make a reduction of 10 per cent. between September 1925 and April 1926 for which there is very little evidence.

Mr. Balfour.—There is no doubt that prices for the home steel have come down.

President.—I am not talking of steel.

Mr. Balfour.—I mean fabricated steel.

President.—You have not given any evidence as to that. You are simply working on these figures. You tell us these are the prices. So far we have got no evidence what the c.i.f. price of British fabricated steel is?

Mr. Balfour.—The evidence is the low prices quoted.

President.—Have you given us any?

Mr. Balfour.—We find it difficult to get examples.

Mr. Mather.—Did you get that Rs. 72-5 by working back from the landed cost? How did you assume that? Is that the actual landed cost?

Mr. Balfour.—It is really an assumption of what we consider has been the drop in the cost of fabrication at home. We have said it has gone down in the same ratio as our cost.

Mr. Mather.—You have given a much bigger drop.

Mr. Balfour.—We have not.

Mr. Mather.—It is a much bigger percentage.

Mr. Balfour.—The percentage may be higher.

Mr. Mather.—50 per cent. greater drop in rupees.

Mr. Balfour.—We can only assume that the low price at which fabricated steel has been put on the Indian market is not due solely to the drop in the price of steel. Therefore the difference must be in the cost of fabrication.

President.—You simply say that the British manufacturer buys his steel at the same rate as you do.

Mr. Balfour.—That is so.

President.—That is not necessarily so, because you yourself have said just now that Braithwaites were able to buy cheaper than you.

Mr. Balfour.—Therefore it is possible that their steel is cheaper than we can procure.

President.—You take the same price of steel. In 1924 there was not this very keen competition, but to-day when the competition is so keen is it impossible that the British manufacturer may be able to get his steel at a much lower rate than the ordinary man would be able to get it?

Mr. Balfour.—It is quite possible. It is more than probable.

President.—Therefore my point is that we can find no evidence at present that the fabrication cost has come down.

Mr. Balfour.—We have got to assume that the price of steel is lower than ours or that there has been a reduction in the cost of fabrication.

President.—Unless you are able to give some price for the imported fabricated material, the same as you did before, we have not got the means of checking these figures.

Mr. Balfour.—We very much wish to give you these prices, but it is impossible for us to get them.

President—Have you had any orders for fabricated steel since we last enquired, *i.e.*, February 1924?

Mr. Balfour.—Only for the extension of the Sone bridge.

President.—Have you not received any orders for fabricated steel, since we last reported.

Mr. Balfour.—I will look up if you like.

Dr. Matthai.—Have any quotations been published in the Indian Trade Supplement?

Mr. Balfour.—Very few.

Dr. Matthai.—Nothing at all?

Mr. Balfour.—Here is one quotation taken from the Trade Supplement (handed in).

Dr. Matthai.—Last year Messrs. Jessop and Richardson and Cruddas gave us specific cases. But Messrs. Burn and Company never give us instances. It makes one a bit suspicious.

Mr. Balfour.—I don't know whether they have a better organization than we have, but the prices are not given to us. They refuse to give us the information. We cannot go further than that. If we can get prices to compare with the prices that we have quoted, we are quite willing to put them up for comparison. We don't want to keep anything back from you.

Dr. Matthai.—You speak of orders not coming to you. Suppose I put this suggestion forward. What happens in the case of fabricated steel is that there is general depression, a general absence of orders, and Messrs. Burn and Company, Limited, are suffering in the same way as the fabricated steel industry all over the world.

Mr. Balfour.—I don't think that is correct.

Dr. Matthai.—Give us evidence. It is for you to prove.

Mr. Balfour.—There is evidence that we have lost the jobs but where they have gone to we do not know.

Mr. Mather.—In most cases you do not know whether they have gone to any firm in India.

Mr. Balfour.—No.

Mr. Mathias.—Except this one firm.

Mr. Balfour.—Yes, Braithwaite's. The Government of India would not like us to go and form an alliance with a home firm. It is not our policy to do that. Our policy has always been to support Tata's.

Mr. Mathias.—Their cost of fabrication cannot be any higher than yours.

Mr. Balfour.—No. Our shops are well written down. Therefore we have got a great advantage over them in the matter of depreciation.

Mr. Mathias.—Where is this firm's works situated?

Mr. Balfour.—At Kidderpore.

Mr. Mathias.—Can you tell me whether a certain number of your orders are what may be called urgent orders which have got to be done within a certain time, and for which they would not call for tenders from England.

Mr. Balfour.—No.

Mr. Mathias.—Could you give me any idea as to the percentage of such orders?

Mr. Balfour.—It is very difficult to give you that. The East Indian Railway for instance as far as we can understand have not been calling for bridge work at home except for spans above 80 feet. Everything else is done in the country.

Mr. Mathias.—Would it be right to say that half the orders that you got were for urgent work.

Mr. Balfour.—No, very much less than that.

Mr. Mathias.—On the whole they are very few.

Mr. Balfour.—Yes.

Mr. Mathias.—Could you give me any idea as to the percentage?

Mr. Balfour.—No.

President.—According to your case it was intended that you should get Rs. 29-5 substantive protection. You get only Rs. 13-5 and so you lose Rs. 16—that is what you say.

Mr. Balfour.—Yes, but we now require substantive protection to the extent of Rs. 39-5 as shown in our statement of our claim printed on page 251 of the Blue Book.

Dr. Matthai.—With regard to the statement of comparative costs you assume, don't you, that the freight on fabricated steel is the same as the freight on rolled steel.

Mr. Balfour.—Yes.

Dr. Matthai.—That is not a right assumption because the freight is considerably higher on fabricated steel. The way in which you have put it would suggest that fabricated steel as such gets no freight protection as compared with rolled steel, which is not a correct assumption. I should like you to get some information. I suggest that the difference is about £1 per ton.

Mr. Balfour.—If the bridge work is rivetted together, I would say yes, but a great deal of fabricated steel comes out as loose sections.

Dr. Matthai.—What is the freight you pay on rolled steel?

Mr. Balfour.—22 shillings.

Dr. Matthai.—The freight on a wagon is £2-10-0. The rate on fabricated steel must be somewhere between the two—perhaps nearer £2.

Mr. Balfour.—Yes, if the sections are rivetted together and are therefore bulky and heavy, but most of the fabricated steel comes out just like ordinary channels, and angles. I don't see why the freight should be higher.

Dr. Matthai.—On a thing like bridgework there would be a certain amount of rivetting.

Mr. Balfour.—If full spans or half spans were imported completely rivetted up, I should think that the freight would be higher, but if the same spans came out as plates and angles, I don't think that the freight would be higher.

President.—We never gave you the cost of British fabrication as Rs. 90.

Mr. Balfour.—It was accepted by you I think in your first Report.

President.—I don't know where this Rs. 90 comes from. If you want to get at the price of British fabrication, you must get the f.o.b. price of British steel and then the f.o.b. price of British fabricated steel. The difference between the two may be taken reasonably as the cost of fabrication and profit subject to adjustment.

Mr. Balfour.—I thought that Rs. 90 was always accepted. I don't remember this being questioned in the previous enquiries.

Mr. Mathias.—I understand that English fabricated steel comes out in small sections.

Mr. Balfour.—Not all.

Mr. Mathias.—In this estimate, have you taken the Indian fabricated steel also in small sections or completely rivetted up? If one is in small sections and the other completely rivetted up, there ought to be some allowance for the consequent difference in cost.

Mr. Balfour.—It is so difficult to say. We assume that we are calculating on the same basis.

Mr. Mathias.—On the Indian fabricated steel such an allowance is made for rivetting up.

Mr. Balfour.—Yes. Our quotation " f.o.r. works " corresponds to the imported landed cost.

Mr. Mathias.—I take it that if it comes out in large pieces then as Dr. Matthai contends, the freight would always be higher.

Mr. Balfour.—Perhaps.

Mr. Mathias.—Then if it comes out in small pieces you will have to add the cost of rivetting out here.

Mr. Balfour.—The constituents would do that.

Mr. Mathias.—Why should they? Both the Indian and the European product would be supplied rivetted up on site.

Mr. Balfour.—No. Our rates are f.o.r. works. The home manufacturers would quote f.o.b.

President.—Of course it is assumed more or less that the British price of fabrication is the difference between the total cost of fabricated steel and the price of the raw material, but here you have taken the c.i.f. price. What we should do is to get the f.o.b. price of British rolled steel and then add one-tenth for wastage and then get the f.o.b. price of British fabricated steel and the difference between the two is the cost of fabrication. In your case deduct the actual price of steel that you have to pay and your total selling price and the difference between the two is the cost of fabrication. Now, as regards your cost of fabrication we shall assume that Rs. 117 more or less represented your cost of fabrication, in 1924.

Mr. Balfour.—Yes.

President.—Now we have to reduce your cost of fabrication of 1924 to that of 1926. You suggest an allowance of Rs. 5 so that Rs. 112 would represent the present cost of fabrication. We have got to consider whether this is a reasonable allowance for the rise in the exchange and other things.

Here again you run into this difficulty about the possibility of the fabricating industry standing without protection. If we take it that your fabrication cost is Rs. 112 and the British Rs. 72-5, that means your fabrication costs are 50 per cent. above the other so that it is rather a difference to make up before you can dispense with protection ultimately. How do you think you can stand without protection on the basis of the figures you have given?

Mr. Balfour.—We think we shall be able to exist without substantive protection in wagon work before we do so on bridge work.

Mr. Mather.—It is quite possible for the Board to recommend protection for wagons and not for bridgework. What sort of a case would you make out for bridgework?

Mr. Balfour.—So far we have made out a good case for bridgework. There was a drop in prices and rise in exchange between 1924 and 1925 there has been a still further drop since you issued your last Report. Labour has not come down. The tendency of labour in bridgework is to go up.

Mr. Mather.—That would indicate that while it might have been correct to recommend protection in 1924 on the assumption that you would ultimately be able to stand without it, it becomes evident now that it would be difficult for you to do without it.

Mr. Balfour.—Competition is getting more acute.

Mr. Mathias.—I understand the competition is mainly internal, not with imported fabricated steel?

Mr. Balfour.—I have given you three instances, and there may be more of which we have no information. Before the war we used to do work for the Madras Presidency, we don't do that now.

President.—Last time we took Rs. 117 on a percentage basis. We took 60 per cent. and 40 per cent.—60 per cent. for materials and 40 per cent. for the cost of fabrication. If we take the percentage on this low price of steel, the figure would be very much smaller. Can we get any reasonable idea of the relative cost of manufacture, treating wagons as a fabricated industry?

Mr. Balfour.—I don't think so. It is very seldom that we get an order for two bridges of identical design.

President.—We must have some figures to see what the present costs of fabrication are. We more or less satisfied ourselves that Rs. 117 at that time might be near the mark.

Mr. Balfour.—Conditions have not changed so much. Direct labour has not come down; if anything it tends to go up in bridgework. There is saving in fuel and power and miscellaneous stores.

President.—That you put down at Rs. 5 a ton.

Mr. Balfour.—Yes.

President.—On these figures you claim you have lost Rs. 16 protection.

Mr. Balfour.—That is correct. We require substantive protection to the extent of Rs. 39-5 as shewn in our statement on page 251 of the Blue Book.

President.—We have got to satisfy ourselves whether your costs have not come down by about as much.

Mr. Balfour.—As I said, the tendency of labour costs for bridgework is to increase. Our labour is continually grumbling at the low rate we pay on bridgework. It is not the same in other departments.

Mr. Mather.—Is it perhaps because you get less work?

Mr. Balfour.—No. I don't think at any time labour has been overpaid for bridgework. There is always difficulty in getting the right type of mistry and contractor as bridgework is very accurate work, and we have inspectors on the works each day.

Mr. Mathias.—Perhaps it would be useful to get a short note on the activities of Messrs. Burn and Company.

Mr. Balfour.—It has been in existence since 1780. We will give you a note.

Mr. Mathias.—If you could also give some sort of statement of your reserves too, it would be useful.

Mr. Balfour.—We will.

MESSRS. BURN AND COMPANY AND THE STANDARD WAGON COMPANY.

B.—ORAL.

Evidence of Messrs. J. D. BALFOUR and R. F. WALKER recorded at Calcutta on the 21st July 1926.

Fair Selling Price of the Indian Made Wagon.

President.—We will go into the question of your fair selling price for a wagon to-day. We will start with the Standard Wagon Company. Your fair selling price means your works cost, *plus* your overhead and profit on the manufacture. I understood you to say that at present without any extensions your capacity was 2,000 wagons.

Mr. Balfour.—We considered it so.

President.—But that you could raise it to about 2,500 by putting in a little more capital.

Mr. Balfour.—That is right.

President.—That would involve an expenditure of about Rs. 1,00,000.

Mr. Balfour.—A little over a lakh of rupees.

President.—How long will you take to complete the extensions?

Mr. Balfour.—Part of the extensions have been completed.

President.—We are not concerned really speaking with 1926-27. May we assume that by 1927-28 if any orders are given, you will have completed the extension and increased your capacity to 2,500 wagons.

Mr. Balfour.—In our opinion we will have increased our capacity to 2,500, but that may not be accepted by Government.

President.—I am not talking of that. You say you are going to spend another lakh of rupees in 1926-27. When that money has been spent, your capacity will go up to 2,500.

Mr. Balfour.—Yes, in our opinion.

President.—May we assume then that at the end of 1926-27 you will have spent the money and that your capacity will have been increased in 1927-28 to 2,500 wagons, or does it depend on something else?

Mr. Balfour.—We will put down the plant for 2,500 if we feel sure that we will get orders.

President.—You must not try to impose any conditions either on this Board or on the Government. If you do, we must take your capacity at 2,000 wagons. We must know what you propose to do. What will be your capacity in 1927-28?

Mr. Balfour.—2,500.

President.—Will you spend the money that is necessary by then?

Mr. Balfour.—Yes.

President.—Then for our calculations, we will have to proceed on the assumption of 2,500 wagons.

Mr. Balfour.—Yes, provided Government give us the sanction for 2,500 wagons, but if the Board start and make the calculations and we put down that extra machinery, but if Government turn round and say that we are only capable of doing 2,000, then there is no point in calculating on the basis of an output of 2,500 wagons per year.

President.—I cannot say what the Government might do, but I think the Government is entitled to say that until your capacity is increased to 2,500, a greater output than of 2,000 cannot be expected. Why should they assume that you had increased your capacity to 2,500 wagons?

Mr. Balfour.—If we put down the extra machinery, it is up to the inspection department to tell us in which Department, if any, we lack the machinery to turn out 2,500.

President.—You don't expect the Government experts to advise you how you should extend your plant.

Mr. Balfour.—We don't want that. If we say that our capacity is 2,500, and they doubt our assertion we want them to tell us in which department we are under-equipped.

President.—You are getting away from the point. My only point is whether you would have spent this Rs. 1,00,000 by 1927-28. That is what I want to know.

Mr. Balfour.—We will spend it.

President.—You couple it with this other reservation that you will do it if you get your orders.

Mr. Balfour.—I withdraw that remark. If we put down the additional plant, our capacity will certainly be increased to 2,500. At the present moment our plant is capable of turning out 2,000. We can demonstrate it but Government estimated our capacity to be only 1,750 and they have not told us in which department our weakness lies. We don't think it reasonable of them.

President.—If you were to raise it to 3,000 wagons, how much more money would you have to put in? Have you got any estimate?

Mr. Balfour.—It would probably take 1½ to Rs. 2½ lakhs. Certain departments are now capable of turning out 3,000 wagons.

President.—Taking the whole thing, would it cost about Rs. 2,00,000?

Mr. Balfour.—Yes.

President.—Supposing you had the money, how long would you take to complete your extensions?

Mr. Balfour.—One year.

President.—Would it mean any increase in your working capital?

Mr. Balfour.—Yes. It would go up in proportion to the number of wagons.

Mr. Walker.—Probably not in absolute proportion.

President.—You have taken Rs. 16 lakhs as your working capital.

Mr. Balfour.—Yes.

President.—Will it go up in that proportion?

Mr. Balfour.—It would very nearly go up in that proportion.

President.—As regards the Indian Standard Wagon Company, when did you start operating?

Mr. Balfour.—In 1924. We got the order at the end of July. We probably started about December. About January or February, we made a sample wagon.

President.—When did you close down actually?

Mr. Balfour.—We closed down in April 1924.

Mr. Walker.—We will have to verify that.

President.—You were closed down for 4 or 5 months.

Mr. Balfour.—Yes.

President.—What was the reason?

Mr. Balfour.—We didn't get any orders.

President.—Did you have to disband your labour or what did you do?

Mr. Balfour.—Our labour was disbanded and the supervising staff was taken over by Burn and Company, Limited.

President.—Both Indian and the European supervision?

Mr. Balfour.—Both Indian and European supervision. We sent 2 men home of whom one was under agreement.

President.—Did you find enough work for them?

Mr. Balfour.—I cannot say we found enough work for them.

President.—It was not a dead loss.

Mr. Balfour.—No. We had hopes that we would get orders. Burn and Company, Limited, wanted to give the Indian Standard Wagon Company a helping hand.

President.—Did you have any difficulty in getting the Indian labour back?

Mr. Balfour.—It was a long time before we got the number of men required.

President.—What happened to that labour?

Mr. Balfour.—It simply disappeared.

President.—You had to start afresh?

Mr. Balfour.—Right from the beginning.

Mr. Mather.—You have got a fair number of your old men.

Mr. Balfour.—Our contractors were able to get some of the old men back. It took a very long time to train our labour again.

President.—If you didn't get any orders in October, the same thing might happen over again.

Mr. Balfour.—It will. We have got a much bigger number both of labour and staff.

President.—What is the total number?

Mr. Balfour.—I could not tell you now.

President.—From the evidence it appears that you had 1,850 including contractors. How many have you got now?

Mr. Balfour.—About 1,700. That is not including supervision staff and clerks.

President.—Apparently you had the same number.

Mr. Balfour.—Yes, we had the same number then. They were much less efficient than they are now.

President.—It means you have got to get rid of 1,700 to 1,800 men, if you don't have any orders so far as Indian labour is concerned.

Mr. Balfour.—Yes, we might never open again.

President.—I would like you to make some comparison between the Indian Standard Wagon Company and Messrs. Burn and Company, Limited. The Indian Standard Wagon Company gets C-2 type and Burn and Company, Limited, A-2.

Mr. Balfour.—Yes. The Indian Standard Wagon Company have built both A-2 and C-2.

President.—The order to Messrs. Burn and Company is for A-2.

Mr. Balfour.—Yes, 550 altogether.

President.—I was just trying to see how they compared. The cost above material is nearly twice as much in A-2.

Mr. Balfour.—We could easily send details to you.

President.—I just wanted to see whether there should be really as much difference as that.

Mr. Mather.—Power and fuel are enormously higher.

Mr. Balfour.—They would be.

President.—Let us first see what is generally the difference between A-2 and C-2 wagons. How much more work would A-2 involve? In the case of A-2 you have to make the roof, haven't you?

Mr. Balfour.—Yes and higher sides and round ends and stanchions then you have got 6 side, 2 corner, and 6 end stanchions.

President.—It would hardly account for the difference

Mr. Balfour.—We can give you the exact difference.

President.—I have got no time now to work out the figures but I should like to have a statement showing the comparison between the costs of Messrs. Burn and Company, Limited, and those of the Indian Standard Wagon Company for 1925. I think that you had better take the whole thing if you like.

Mr. Walker.—Do you take both Schedules 1 and 2 excluding the overhead?

President.—Exactly these two tables I have taken, but Schedule 1 is the most important. Explain in each case whatever you want to say.

Mr. Balfour.—Then, if there is a big difference you can say what it is due to. We will do that.

President.—Then, I take it that the allocation in the case of Messrs. Burn and Company, Limited, is on the basis of direct labour, is that right?

Mr. Balfour.—Yes.

President.—For instance you have got Rs. 2,52,674 which is the total. Do you allocate it in proportion to the actual amount of direct labour in each department?

Mr. Walker.—Quite; *i.e.*, between wagons and underframes.

President.—I want to see whether you have got any advantage over the Indian Standard Wagon Company. As far as Messrs. Burn and Company, Limited, is concerned, costs are higher per unit than those of the Indian Standard Wagon Company. There may be something to set off against that disadvantage. Messrs. Burn and Company, Limited, may have some advantage which the Indian Standard Wagon Company may not have.

Mr. Balfour.—The Indian Standard Wagon Company have got a distinct advantage in price of coal in being nearer the coalfields. They have also another advantage in the matter of electricity which they get from the Indian Iron and Steel Company, at a low rate.

President.—Their labour may also be cheaper.

Mr. Balfour.—Their erecting labour is slightly more expensive. Forging labour is practically the same but the machine shop labour is slightly less.

President.—It means that they have got an advantage over you practically in every respect.

Mr. Balfour.—I say that their erecting labour is more expensive.

President.—That is to say "assembling."

Mr. Balfour.—Yes and rivetting.

Dr. Matthai.—Why should the machine shop be less?

Mr. Balfour.—They have got more up to date machinery at the present moment.

Dr. Matthai.—We are talking of the advantage by reason of the Indian Standard Wagon Company being situated at Asansol.

Mr. Balfour.—There are two distinct advantages of which we know, *viz.*, the price of coal and electricity.

President.—What advantage have Messrs. Burn and Company, Limited, over them?

Mr. Balfour.—The advantage of being situated in an industrial centre.

President.—What does it matter where the works are as regards wagons? They go on their own legs so to say from the works to the market.

Mr. Balfour.—We know that labour is always attracted towards an industrial centre rather than up-country; that is to say if we lose two or three men to-day we might be able to replace them next day. If we lose two or three men up in Asansol, it might take a week or two to replace that labour. They will have to be drawn from the industrial centre.

President.—Supposing your costs are 50 per cent. higher, they might have a little more reserve in the matter of labour than you have, but their ultimate costs would be very much lower than yours.

Mr. Balfour.—We don't think that there would be very much difference between the Indian Standard Wagon Company and Messrs. Burn and Company, Limited.

President.—There is apparently.

Mr. Balfour.—You are not comparing the same thing.

President.—I want to know for that reason what adjustments we may have to make.

Mr. Mather.—For instance for power you pay half an anna at Asansol.

Mr. Balfour.—Messrs. Burn and Company, Limited, paid about ¾ths of an anna, which is slightly less than the rate at which we can obtain it from outside sources.

Mr. Mather.—I take it that both the Indian Standard Wagon Company and Messrs. Burn and Company, Limited, Howrah, pay exactly the same price for their steel f.o.r. Tatanagar?

Mr. Balfour.—The cost of Tata's material is the same in both cases because we make the contract for the two concerns.

Mr. Mather.—There is no difference in the price of material.

Mr. Balfour.—Absolutely no difference. Messrs. Burn and Company, Limited, have got a slight advantage over the Indian Standard Wagon Company in the matter of imported materials. Being nearer the docks, they have not got to pay so much freight on imported fittings.

Mr. Mather.—I put it to you that on the whole Messrs. Burn and Company, Limited, are not so favourably situated as the Indian Standard Wagon Company.

Mr. Balfour.—We don't think that they are unfavourably situated in comparison with the Indian Standard Wagon Company with the exception of those two factors already mentioned.

Mr. Mather.—Another factor is that the Indian Standard Wagon Company have got a new works designed specially for wagon building, and they are not cramped by previously existing buildings. Don't you think that you have a substantially better layout at Asansol which leads to economy?

Mr. Balfour.—Yes.

Mr. Mather.—That should show on labour costs.

Mr. Balfour.—Yes, but not to a very great extent.

Mr. Mather.—But there is less difference in labour costs than in anything else.

Dr. Matthai.—For comparison we may take 418 wagons in the case of Messrs. Burn and Company, Limited, and 1,020 wagons in the case of the Indian Standard Wagon Company, so that the comparison may be more or less on half the capacity for the year 1925-26.

Mr. Walker.—But the underframes we turned out that year did not represent half our capacity. Therefore the "cost above materials" and the "overhead charges" allocated to wagons are of course heavier than they would have been had we been working to capacity on underframes. Both wagons and underframes are manufactured in the same Department.

Dr. Matthai.—It is near enough. In Burn and Company, Limited, you take one underframe as the equivalent of 3 wagons?

Mr. Balfour.—Yes.

Dr. Matthai.—Your costs here are on that basis?

Mr. Balfour.—The cost of an underframe is about three times the cost of a wagon and labour is three times that on a wagon.

Dr. Matthai.—In trying to arrive at your cost per wagon, taking the whole cost of a wagon as against an underframe, I should proceed on the

basis on which you have prepared your cost, namely that an underframe was equal to 3 wagons?

Mr. Balfour.—Take it at 2½. Some people say 3, some say 2. We took it at 3.

Dr. Matthai.—It depends a great deal on the particular design of the underframe?

Mr. Balfour.—Yes, and price also.

Dr. Matthai.—What was the actual price received by you on each order from 1922-23?

Mr. Balfour.—We will let you have a statement.

President.—You have given the whole output in these different tables. In each case I want to know the price you received for them?

Mr. Walker.—In that case it will be an average price because there are differences in design.

President.—In this 1922-23 order of 497 wagons for Burn and Company, what were the wagons?

Mr. Walker.—450 A-2, 42 C-2, 5 C-3.

President.—In the Indian Standard Wagon are there any A-2 wagons?

Mr. Walker.—No.

President.—I would like another comparison in the case of the Indian Standard Wagon Company. Make a comparison between 1922-23 (Schedule I) 497 wagons, against 1925-26 418 wagons. I find in the total cost above material there is a difference of about Rs. 650 per unit and we would like to see how it was brought about.

Mr. Balfour.—We will do that for you.

President.—I want some comparison between underframes, 1922-23 and 1925-26.

Mr. Balfour.—But they are two different types. One had fixed trussings and the others had turn buckle trussings. However we will give you a comparison.

Dr. Matthai.—Between your tender for the East Indian Railway last year and your tender for the Great Indian Peninsula Railway this year there is a difference of Rs. 1,000 on underframes. Is it entirely a question of design?

Mr. Balfour.—Yes.

Dr. Matthai.—What I am trying to do is to compare the underframes of one year with another.

Mr. Balfour.—A great deal depends on the design of the underframe. I may mention that "The Great Indian Peninsula" Railway called for tenders for 98 underframes for delivery in this financial year and to give that delivery we would have had to obtain British castings to enable us to start the work in time. Continental delivery is much slower than British but British castings are more expensive. That was the only way to execute the order within the time specified. But now we understand that this order has been placed with a firm in India with extended delivery.

Dr. Matthai.—Which firm is that?

Mr. Balfour.—Messrs. Jessop and Company. Had the same opportunity been given to us our price would have been considerably lower because we would have been running out of work about that time and this order would have carried us on for another three months. Had we been given the opportunity to revise our tender with extended delivery to July we should have been able to quote the railway a considerably lower figure.

President.—When did you have to deliver?

Mr. Balfour.—Delivery had to be given this financial year. We think we are right in saying that that order has been placed with an extended delivery till July 1927.

Dr. Matthai.—There is a difference of four months.

Mr. Balfour.—A difference of four months would have kept our shops employed until we received orders for the next years wagon requirements. We don't think it fair.

Mr. Mathias.—What was the difference in the price between the two?

Mr. Balfour.—We don't know. What we say is that if they intended to alter the conditions of tender they should have asked us for a revised quotation with extended delivery.

Dr. Matthai.—Supposing that element, I mean the period of delivery, did not enter into the question, trying to put your East Indian Railway tender on the same basis as the Great Indian Peninsula Railway tender, what really would have been the difference?

Mr. Balfour.—That would depend on the design of the underframe. We think there would be a difference of about Rs. 400. I am of course talking from memory. We built the East Indian Railway underframes at an estimated loss of about Rs. 235. We allowed for a profit of Rs. 200 on the Great Indian Peninsula Railway, underframes. We cannot always go on manufacturing underframes at a loss, and we don't know of any other firm in India which could have delivered them within the time originally specified.

President.—I should like to make a note of this point to put it to Railway Board.

Mr. Balfour.—That is the Great Indian Peninsula Railway order for 98 underframes.

President.—You were asked to deliver the complete quantity before the end of the financial year?

Mr. Balfour.—Yes, we quoted on that assumption.

President.—Who gave the Order.

Mr. Balfour.—The Great Indian Peninsula Railway.

President.—And Jessops underquoted?

Mr. Balfour.—We presume Jessops must have underquoted.

President.—But you say the time was extended to July 1927?

Mr. Balfour.—So we understand. We wanted the job very badly.

President.—I want to know a little more about your allocation, that is allocation between your general engineering and the wagon department.

Mr. Balfour.—One is the machine shop and the other is the carriage and wagon department.

President.—I really do not understand how you get this percentage, 115 and 216. I would like to understand what it means.

Mr. Balfour.—The overhead charge of any plant or any shop depends greatly on the capital expenditure or the amount of money invested in that department. For example there is a great amount of capital invested in the drop stamp shop and smithy and consequently the oncost is greater than the oncost would be for, say, an erecting shop.

President.—It is the percentage of the total wages in each shop.

Mr. Walker.—Yes. The ratio varies from shop to shop.

President.—It is some multiple or division of the wages in each case.

Mr. Balfour.—That is right.

President.—It is only guess work.

Mr. Walker.—No, we have got a charges account for each department.

President.—For the engine shop and smithy you show Rs. 56,280.

Mr. Walker.—That is wages.

President.—You just double the amount.

Mr. Balfour.—200 per cent. on direct wages represents the amount of the overhead expenses.

President.—It is conjectural.

Mr. Balfour.—No.

President.—You say no and I say yes. How can you say that it is exactly double.

Mr. Balfour.—We have got our charge sheet for every department and we therefore know what percentage to put on our labour to cover overhead expenses.

Mr. Mather.—If you work out your charge sheets every month do you realise that percentage every month?

Mr. Balfour.—No, not every month.

Dr. Matthai.—When you are trying to estimate the cost of an engineering shop, you have got to make an estimate of what your charge would be on a normal output. Once you have done that then month by month according to the actual proportion of direct labour these things are varied, am I right?

Mr. Walker.—The "oncost" is not varied, but the total of the amounts debited to the various cost sheets does vary in total from month to month.

Dr. Matthai.—If you are able to get your normal output, there is neither gain nor loss.

Mr. Balfour.—No.

Dr. Matthai.—If you work on less than your normal output there is a loss. If more, there is a profit. There is a very considerable element of purely theoretical calculation in this system of accounting which you can't get away from.

Mr. Walker.—In the case of a Company not having very much experience such as the Indian Standard Wagon Company, we agree, but in the case of Burn and Company, Limited, where they have an extended experience, there is nothing conjectural.

Dr. Matthai.—Your estimate for the normal output would be verified by experience. It comes to that.

Mr. Walker.—Yes.

Mr. Balfour.—This is the accepted modern method of cost accounting for engineering shops.

Mr. Mather.—This is what you regard as the average ratio between your labour expense in a particular department and the oncosts of a particular department for several years. How often do you revise your percentage?

President.—It appears that you include in your costs everything except profits so that all these figures for our purposes are quite unreal.

Mr. Balfour.—We don't know of any more suitable method.

President.—I am just trying to see what value we should attach to these figures in our calculations, because if we take these as your works cost, they are a good deal more than your works costs as we understand it.

Mr. Walker.—But they may be good deal less.

President.—These costs include several items which we don't include in the works cost. I pointed out that yesterday.

Mr. Balfour.—Yes.

President.—If you take that as your works cost, and then go on adding overhead charges, profit and so on you duplicate.

Mr. Balfour.—Yes.

President.—I am trying to point out that for our purposes these figures are useless owing to this method.

Mr. Walker.—For example you make depreciation a direct debit to individual orders.

Mr. Mather.—Can we take it that your allocation charge includes everything that you require except the profit on the capital invested?

Mr. Walker.—Yes.

President.—Their calculations are different. In the case of the Standard Wagon Company, there is no question of any allocation. There are no

complications, but so far as Burn and Company, Limited's figures are concerned for one thing their costs may appear at first sight higher than the Indian Standard Wagon Company's costs.

Mr. Balfour.—The Indian Standard Wagon Company's costs include the same charges.

President.—I am talking of the figures that you have given now. They do not now include the overhead and other charges which were included before.

Mr. Walker.—The actual cost sheets do, but not the other figures.

President.—In the Indian Standard Wagon accounts there is no allocation.

Mr. Walker.—This 200 per cent. includes depreciation, but you can practically neglect this cost sheet, having the figures also before you in the form you prescribe.

President.—I do not know whether you understood my point or not. So far as Burn and Company, Limited's costs are concerned, they include items which are not included in the way in which we make up the accounts.

Mr. Walker.—We agree.

President.—But you have taken them in the same way, havn't you in preparing the cost sheets.

Mr. Walker.—In preparing the cost sheets, the principle is the same.

Dr. Matthai.—They would be very much in the region of conjecture so far as Indian Standard Wagon Company is concerned.

Mr. Walker.—In the case of the Wagon Company the two things are not parallel.

President.—In the Indian Standard Wagon you have the question of actual charge. There is no question of allocation.

Mr. Walker.—Quite.

President.—In Burn and Company, Limited, you have got this practice of allocation. First of all you have got a big engineering works. You don't keep a separate block account for the wagon department and for other engineering works.

Mr. Walker.—Yes, we keep a separate cost account, but there are certain items which are common to all departments, *viz.*, office buildings, the yard, etc.

President.—And general supervision.

Mr. Balfour.—Yes, things like that are allocated.

President.—Power and fuel—all this is allocated.

Mr. Balfour.—For your purposes allocation comes in.

President.—It makes all the difference. Allocation makes a tremendous amount of difference in the total costs. It is not merely a question of the allocation as between wagons and underframes, but it is a question of allocation in many of the important items as between them and the general works of Burn and Company, Limited.

Mr. Walker.—That allocation is also an allocation of a large portion of expenditure which is expended for the benefit of the works in general. Then we have taken the ratio of the productive labour in the carriage and wagon department to the total wages of the whole works. It works out to about 30 per cent. and the block is about a third. We are afraid some such method is inevitable.

President.—It is quite inevitable, but it is unfortunate. We cannot really ascertain what your works costs are. For our purposes that is what it comes to. The Standard Wagon is the only one that remains. In their case you have got only one particular type of wagon and it would be rather difficult to apply their costs to Burn and Company, Limited. The only other way that I can think of is this. We take the C-2 wagon and the Indian Standard Wagon Company cost. Having got the cost of the C-2 wagon, then

we say that the c.i.f. prices of the A-2 wagon and the C-2 wagon are such and such and adopt that ratio to works cost.

Mr. Balfour.—That would be a way out of the difficulty.

President.—Or we can take the price that you actually got for the C-2 wagon and the price you actually got for A-2 and work out the ratio. I don't see any other way.

Mr. Walker.—There is a very curious fact that the home manufacturer finds the C-2 more expensive than we do.

Mr. Balfour.—There is less difference in the f.o.b. or c.i.f. price of C-2 than A-2.

Mr. Mathias.—The charges are very much less.

Mr. Walker.—C-2 wagons are cheaper.

President.—The ratio would remain the same in the two cases.

Mr. Balfour.—The ratio is not one and the same between an Indian A-2 and an Indian C-2. The f.o.b. prices are relatively higher than they should be.

President.—I think I must put the case very plainly to you. I have just pointed out to you my difficulty in the matter. It is impossible for us to ascertain your costs on our method. I am not finding fault with your system. You cannot adopt any other system except the one you have got, but for our purposes that system is not very helpful. Therefore the only other way I can see is to take, as I told you a little while ago, the C-2 wagon as a typical wagon and take the Indian Standard Wagon costs with any adjustments that we may have to make as typical. Then we find a reasonable selling price of the C-2 wagon on that basis. If we find that there is any difference between that price and the c.i.f. price of the C-2 wagon, then we come to the conclusion that if protection is to be given, that should be the basis. Are you prepared to accept this principle, because as I say it is hopeless to go into your costs? I suppose in the case of Jessops there will be the same difficulty. In the case of Peninsular Locomotive Company they have just started and so their costs won't be of much help.

Mr. Walker.—If you would give us a little more time to go into the figures, we would prefer to give you a considered reply. We have already worked it out in the way it is actually done in business.

President.—I am not concerned with how you work out your costs, because I may frankly tell you so far as I am concerned, I cannot attach any importance to your figures from our point of view.

Mr. Balfour.—Would you just let us think over and we will give our reply?

President.—I am not giving any final opinion on the subject, but I am just telling you what my difficulty is in the matter. I would like to know your considered opinion in the matter. There is no other way that I can see by which we can determine the works costs, the overhead and the profits which make the selling price.

President.—The Indian Standard Wagon Company make only C-2 wagons.

Mr. Balfour.—Supposing we endeavour to work out the cost of the A-2 wagon built in Asansol.

President.—That would be an estimate.

Mr. Balfour.—Yes, but I can assure you that it will be a very close estimate.

President.—You can send it to us for what it is worth. I am not a believer in estimates when we have actuals. You can give us an estimate if you think it would help you but I prefer to have the actual figures and you have not built A-2 wagons in Asansol. I think I must leave it at that.

Mr. Balfour.—We will let you have a statement.

Replacement Value of the Indian Standard Wagon Company's Plant.

President.—I do not propose to go into the block value of Messrs. Burn and Company, Limited. We must proceed on one basis. At present your book value is very much smaller than the replacement value that you give. To that extent in competition you may have some advantage.

Mr. Balfour.—Are you not going to take the block value in ratio to that of the Indian Standard Wagon Company.

President.—We don't take your block value at all in that case. We don't go into your selling price or your block value or anything. When we have not got the works costs, what is the good of going into that question?

Mr. Mathias.—I thought you said yesterday that under no circumstances would you tolerate any other firm getting a bigger bounty than the Indian Standard Wagon Company.

Mr. Balfour.—Yes.

Mr. Mathias.—The Indian Standard Wagon Company produces more cheaply than Burn and Company. There is no real point therefore about going into the question of Burn and Company costs. You say that you could not differentiate between Burn and Company, Limited and the Indian Standard Wagon Company in the matter of protection.

Mr. Balfour.—No, nor between the Indian Standard Wagon Company and any other company.

President.—You have got one very great advantage over them in this respect that your present day block value is very much smaller and so your overhead and profits will be comparatively smaller. You can satisfy yourself that way but so far as we are concerned there is no point in going into your overhead and other charges because as I say we have not got your works costs.

Mr. Balfour.—So long as it is not unfavourable to Messrs. Burn and Company, Limited, I am content.

President.—As Mr. Mathias has just pointed out, you cannot have two different systems for two different firms.

Mr. Balfour.—No.

President.—So far as I can see there is no other alternative at present. As regards the revised statement of the Indian Standard Wagon Company's block, it is much better to substitute it for the original one instead of printing them twice over. Your block value comes to Rs. 57,28,133. You have reduced your block as it stood in 1921-22 by about one-third, that is what it comes to. The only point is whether you have reduced your block value enough and I want to know on what basis you have reduced it by about one-third.

Mr. Balfour.—We went very carefully into the whole thing and considered that it was essential to reduce the capital by about Rs. 30 lakhs.

President.—I am not talking of the reduction of capital. I am talking of the reduction of the block value.

Mr. Balfour.—We took every machine separately and revalued it.

President.—It is curious that it is just about one-third. How did you get the present day value?

Mr. Balfour.—We are always buying machinery. We have good knowledge of the prices of machinery.

Mr. Mather.—You are satisfied that the prices have come down to that extent.

Mr. Balfour.—We are continually asking for prices of new machines for use in our shops and for sale even although we don't necessarily purchase them.

Dr. Matthai.—Generally the prices of machinery have come down by about a third.

Mr. Balfour.—Yes. Some of them we have reduced a little more and some a little less.

Mr. Mather.—The same thing applies to buildings.

Mr. Balfour.—We know the value of buildings. We build them every day.

President.—That is very satisfactory to know. Is your machinery British or American?

Mr. Balfour.—95 per cent. British.

Dr. Matthai.—And the rest is American?

Mr. Balfour.—Yes. It is only a few automatic and semi-automatic machines that come from America.

President.—So far as American machinery was concerned, what reduction did you find it necessary to make?

Mr. Balfour.—I could not say off hand but the percentage to the total was very little.

Mr. Walker.—American prices would also decline in sympathy with world prices.

Mr. Balfour.—We went into this question very carefully—item by item—and it must be remembered that we got a great deal of the Indian Standard Wagon Company's machinery very cheaply. We bought a great number of machines when the Home Government were selling them by auction and many of these at the present moment we could not possibly replace at the price we paid. I myself bought a great many of the machines for the Indian Standard Wagon Company and my policy was to buy it at about a third of the new price.

President.—How much did you buy that way?

Mr. Balfour.—I could not tell you off hand.

Mr. Mathias.—You have reduced your machinery by about 44 per cent. roughly. Is it a very big reduction?

Mr. Balfour.—You could not replace it at that price. Of that I am convinced.

Mr. Mathias.—In the case of another firm which did not have the advantage you had, the reduction would be considerably higher.

Mr. Balfour.—Very much higher. In fact, if we had not done that, we would not have been able to finish our works.

President.—In the case of buildings you have not written down very much. The general average comes to about one-third. That means you have written down more in machinery than you have in buildings and you have not written down anything in the case of land.

Mr. Balfour.—That enables us to build cheaper wagons.

President.—You put up your block in 1921-22. When did you place orders for machinery?

Mr. Balfour.—1919 and 1920.

President.—The prices were very high but in terms of the Indian exchange you must have got a very favourable price at that time.

Mr. Balfour.—The Indian Standard Wagon Company were exceptionally fortunate. They remitted home nearly all their money at about 2 shillings to the rupee.

President.—Have you written down the block value of any of your departments besides the Indian Standard Wagon?

Mr. Balfour.—We have reduced by half the block of the Indian Iron and Steel Company, Limited, from about Rs. 3¼ crores to Rs. 1¾ crores.

President.—That is writing down the capital?

Mr. Balfour.—Yes.

President.—I am talking of the block value.

Mr. Balfour.—Automatically the block comes down.

President.—Not necessarily.

Mr. Balfour.—There is no justification then for writing down your capital if you don't reduce your block. You have to petition the High Court and swear that the figures submitted represent actual values.

President.—Your assets may be 5 times as great as your capital. Take the case of some of the Jute mills. Their assets may be one crore and their block value is in some cases only Rs. 12 lakhs. One does not necessarily follow the other.

Mr. Balfour.—We see your point, but there is no point in reducing your capital then.

President.—When Mr. Fairhurst comes, we will have to ask him.

Mr. Balfour.—He will tell you all about the Indian Iron and Steel Company, Limited.

President.—I take it that their block was purchased at about the same time.

Mr. Balfour.—The company was floated about a year earlier.

President.—As regards your profit on manufacture, first of all you say your original capital consisted of Rs. 20,00,000 in preference shares and Rs. 40,00,000 in ordinary shares, making a total of Rs. 60,00,000. What interests do these preference shares carry?

Mr. Balfour.—7 per cent. cumulative. We are one year in arrears in dividends on the preference shares but the shareholders gave up 5 years dividends.

President.—And even so you are one year in arrear?

Mr. Balfour.—Yes, for 1924-25.

President.—You don't know about 1925-26 yet?

Mr. Balfour.—No.

President.—You reduced your ordinary capital by Rs. 30,00,000 and your total capital now is only Rs. 30,00,000 but your assets are Rs. 57 and odd lakhs. How did you finance the Rs. 27,00,000?

Mr Balfour.—Rs. 12,00,000 debentures.

President.—What interest do they carry?

Mr. Walker.—1 per cent. above the bank rate with a minimum of 6 per cent.

President.—What does it work out to on an average?

Mr. Walker.—As follows. The Imperial Bank rate was 6 per cent. in 1923, in 1924 it was 6½ per cent., in 1925 it was 5½ per cent., and in the first and second quarters of 1926 it was 5¾ per cent., and we paid 1 per cent. above that.

President.—On overdrafts what was the interest?

Mr. Walker.—Bank rate with a minimum of 6 per cent.

President.—This Rs. 57,00,000 consists of Rs. 30,00,000 shares and Rs. 12,00,000 debentures and what you have got in the depreciation fund. Is that how it is made up?

Mr. Balfour.—Yes.

President.—On which of these amounts do you claim a return?

Mr. Balfour.—We claim a return on Rs. 57,28,000.

President.—Have you spent any money out of your depreciation fund on the block?

Mr. Walker.—Yes.

Mr. Balfour.—We would remind you that when we reduced the capital and the block we also wiped off Rs. 4,42,701 then standing at the debit of profit and loss account.

Mr. Mathias.—In what year?

Mr. Balfour.—That is the total debit in 1925.

Mr. Mathias.—That is to say that is for the year prior to writing down your block?

Mr. Balfour.—When we wrote down our share capital and block. We also wiped off this debit so that the company might start squarely. The only debit that remained was then the arrear of one year's dividend on the preference shares.

Mr. Mathias.—From your point of view the only debit now is the depreciation since that time?

Mr. Balfour.—We have not depreciated since that time.

Mr. Mathias.—Presumably you will have to when the report comes in for the year.

Mr. Balfour.—Even in bad years we allowed for depreciation of the plant.

Mr. Mather.—Actually you put your depreciation into your accounts although there was no fund to meet it?

Mr. Balfour.—That is so.

President.—This implies judging from your block value as you have given it, that your plant is maintained and kept up to date. Do these figures mean that?

Mr. Balfour.—Yes.

Mr. Mather.—But actually you have not been able to use that depreciation in keeping your plant up to date?

Mr. Balfour.—No.

President.—This figure, I take it, represents the amount of money that the new-comer may require when he starts a works?

Mr. Balfour.—Yes. That is why we call it replacement value.

Mr. Mathias.—I think you said yesterday that you were content to accept replacement value at Rs. 43,00,000?

Mr. Balfour.—But I said we could not start a works on Rs. 43,00,000.

Mr. Mathias.—This would include part of your working capital?

Mr. Walker.—No. You cannot replace the works as a going concern for Rs. 43,00,000. You can build the structures and so forth. You cannot start a new concern.

Mr. Balfour.—It is a big job to start new works in this country.

President.—How long would it take to put up another works like yours?

Mr. Balfour.—Three years, to get it going.

President.—From the time you started the company?

Mr. Balfour.—We think so.

Works Costs.

Dr. Matthai.—Please look at your original statement of costs that you gave us for the Indian Standard Wagon Company in your own form, and look at the statement that gives details of the charges (Charges Account). Take the first item—Salaries, Indian and European—you give us for the two years somewhere about Rs. 3,00,000 roughly. Does that represent actual disbursements that you made during the period of 20 months to European, Anglo-Indian and Indian supervisors?

Mr. Balfour.—Yes, actual disbursement.

Dr. Matthai.—Take the other item 'Repairs and Maintenance'. You give four items under this head and the total of the two years comes to about 2 lakhs of rupees. Your depreciation account amounts to 5 lakhs. I take it that what you mean by 'repairs and maintenance' is what may be called revenue depreciation as distinct from capital depreciation. How do you work it out?

Mr. Balfour.—These are actual cash disbursements.

Mr. Matthai.—How exactly do you work out your revenue depreciation?

Mr. Balfour.—On actual disbursement. Supposing a machine breaks down it has to be repaired out of revenue.

Dr. Matthai.—Supposing some part of your plant has suffered damage to the extent of Rs. 50,000 and you have to set it right. Would you put it in your revenue account or capital account? In the railway company, for example, this problem often arises and a sort of rule of thumb they ordinarily have is where a particular item amounts to, say, Rs. 2,000 or less it goes to the revenue account, if it is more than that, it goes to the capital account. I want to know for my own guidance what exactly is the principle on which you distinguish the two things.

Mr. Walker.—That method is one employed by the railways and is necessitated by the "double account system" of accounts they have to keep. We don't employ that method. When a machine breaks down so badly that it cannot be repaired, we buy a new one and charge the old machine off to depreciation and the new one to block.

Dr. Matthai.—I am talking of engineering business generally. Where you have a repair and maintenance account which is 50 per cent. of the depreciation account would you not consider it excessive?

Mr. Walker.—No, I should not.

Dr. Matthai.—Take the next item non-productive labour. That is all indirect labour.

Mr. Walker.—Yes. What we call non-productive labour is really cooly labour. There is indirect labour for example included in repairs to buildings. Repairs to buildings includes wages and material.

Dr. Matthai.—Tell me how you distinguish between non-productive and wages.

Mr. Walker.—The word non-productive is a misnomer, but it is a term generally used. The direct labour is labour immediately charged to the constituent's orders. Indirect labour is one of those services which render possible the running of the works, but which cannot be directly charged to individual constituent's orders.

Dr. Matthai.—What is the difference between indirect and non-productive?

Mr. Walker.—It is the same thing. We call it non-productive because it is a term more generally understood.

Dr. Matthai.—What do you include under general shop supplies.

Mr. Balfour.—Belting, miscellaneous stores.

Dr. Matthai.—These stores come under your consolidated statement.

Mr. Walker.—The particular items to which you refer are direct charges.

Dr. Matthai.—Your managing agency fee, whatever the output may be hereafter, is going to remain at Rs. 12,000 a month.

Mr. Balfour.—It is Rs. 6,000.

Dr. Matthai.—That is not going to vary with your output.

Mr. Balfour.—No.

Dr. Matthai.—Rs. 72,000 is a fixed charge.

Mr. Balfour.—Yes.

Dr. Matthai.—Do your London office charges vary?

Mr. Balfour.—Yes, they vary.

Dr. Matthai.—What about the Calcutta office?

Mr. Walker.—It is a fixed charge about Rs. 25,000.

Dr. Matthai.—The London Office expenses would vary more or less in proportion to the business done.

Mr. Balfour.—Yes, in proportion to the materials purchased.

Dr. Matthai.—Look at the first consolidated statement. I take it that in the way in which you put it here, the aggregate of materials and stores and direct wages would increase exactly in proportion to the output.

Mr. Walker.—Precisely.

Dr. Matthai.—Taking some of these charges, the aggregate would increase, but not in the same proportion as output.

Mr. Balfour.—No use indirect proportion.

Dr. Matthai.—With regard to the others, the aggregate would not increase at all and would remain the same.

Mr. Balfour.—No. Power and coal would go up.

Dr. Matthai.—Your charges could be divided into two classes. There are some the aggregate of which would increase as the output increases but not in the same proportion. There are others in which the aggregate would remain the same whatever may be the output.

Mr. Balfour.—Quite.

Dr. Matthai.—I want you to look up each item.

Mr. Balfour.—Supervision would necessarily go up. The Indian Stores Department would insist on extra supervision.

Mr. Mather.—Not necessarily in full proportion.

Mr. Balfour.—No.

Dr. Matthai.—Take the next item repairs and maintenance.

Mr. Balfour.—They would go up slightly.

Dr. Matthai.—Indirect labour.

Mr. Balfour.—It would go up.

Dr. Matthai.—When you talk of an increased output, *i.e.*, from 1,750 to 2,000 would you say in regard to indirect labour there would be a perceptible increase?

Mr. Balfour.—There would be, but not in direct proportion to the output.

Mr. Mather.—If your output increases by 50 per cent., indirect labour would go up by 20 per cent.

Mr. Balfour.—Yes, about 20 per cent.

Dr. Matthai.—The shop supplies would increase.

Mr. Balfour.—They would increase, but not in the same proportion.

Dr. Matthai.—Taking coal and power together.

Mr. Balfour.—They would go up in direct proportion.

Dr. Matthai.—What about sundries. The figure won't increase perceptibly.

Mr. Walker.—Except water purchased, workmen's compensation would increase and passages might go up slightly.

Dr. Matthai.—Could you give me some idea, when you have executed an order for Government, generally within what time do you get payment?

Mr. Walker.—Usually 90 per cent. is paid in 15 days and 10 per cent. in 30 days.

Mr. Balfour.—The terms of payment we would like on wagons are so much for frames completed, so much when erected and remainder when despatched.

Dr. Matthai.—90 per cent. would be paid within 15 days and the rest within a month.

Mr. Walker.—Yes.

Dr. Matthai.—Supposing I was trying to estimate your cost per wagon from your original statements—whatever the total I get out of these figures in the form in which you have given it here—I should deduct from it a charge which corresponds to work in progress.

Mr. Walker.—No; if you are referring to the statement first sent because work in progress has already been excluded by the operation of our system.

Dr. Matthai.—Calculating on a normal output, let us say I reached this figure of 3,500 per wagon on these statements. Now from Rs. 3,500 I have

got to make a deduction which corresponds to what you call work in progress. Out of this 3,500 supposing I deducted $\frac{1}{60}$th of that, would I get the correct figure of unit cost on the wagons.

Mr. Walker.—I think we have already done that for you.

Dr. Matthai.—If I just deducted $\frac{1}{60}$th out of a total unit cost every year.....

Mr. Walker.—We would not commit ourselves to that.

Dr. Matthai.—What I am trying to do is this. I have got your costs for 1675 wagons. You have given me the statement for it in your own form. I take the whole of it and then I try to estimate what your reductions in various departments would be. Having made all this adjustment I get a total of 3,500. That doesn't include work in progress, because part of the cost that you show for 1675 wagons is really work in progress now. In this particular statement these 20 months your work in progress is $\frac{1}{60}$th of your total cost.

Mr. Balfour.—It so happens this year.

Dr. Matthai.—All these figures refer to this particular period. Therefore $\frac{1}{60}$th would be all right.

Mr. Balfour.—Yes.

Dr. Matthai.—Your total charges in this original statement amount to Rs. 10 lakhs and odd. The loss on charges is Rs. 7 lakhs. I take it what it means is that the normal charges that you estimate for an output of 1800 wagons is Rs. 17 lakhs and odd the two things together.

Mr. Walker.—*Plus* charges for work in progress.

Dr. Matthai.—Do you admit that your estimate of the total charges if your output were 1800 would be Rs. 10 lakhs and odd *plus* Rs. 7 lakhs and odd.

Mr. Walker.—We don't admit that.

Dr. Matthai.—Why don't you?

Mr. Walker.—The charges for that year were Rs. 17 lakhs and odd *plus* the charge on work in progress.

Dr. Matthai.—I take your work in progress at one lakh and odd. That would be all right.

Mr. Walker.—Yes. In the charge sheets, we give you the actuals.

Dr. Matthai.—About Rs. 1,34,000 would be the difference.

Mr. Balfour.—Yes.

Dr. Matthai.—For the whole period.

Mr. Balfour.—Yes.

Underframes.

President.—I want to go now into the question of underframes. The underframes are only built by Messrs. Burn and Company, Limited.

Mr. Balfour.—Yes, and not by the Wagon Company.

President.—You claim that your total capacity is 250 underframes a year.

Mr. Balfour.—Yes, in conjunction with 1,000 wagons.

President.—Can you build all underframes instead of wagons? Have you got enough space?

Mr. Balfour.—Our machinery and shops are not laid out for building underframes only.

President.—That means that you can only build 250 underframes.

Mr. Balfour.—Yes, and a 1,000 wagons.

President.—Since the bounty scheme came into operation how many have you built?

Mr. Balfour.—The only order we received was for the East Indian Railway, 137 underframes.

President.—You have not received any orders since excepting the 5 underframes?

Mr. Balfour.—These five are special underframes. We took these five on at the same rate as 137, *plus*, the price of the extra fittings which were required. The price for the 5 underframes was in the same ratio as we received for 137 underframes.

President.—Did they cost you more to build?

Mr. Balfour.—They will cost us more.

President.—What was the price that you got?

Mr. Balfour.—A little over Rs. 11,000.

President.—There is no fixed demand for underframes in the country. The railways just get them when they like and order as many as they require.

Mr. Balfour.—We have read an article in the "Statesman" about 3 weeks ago that the shops at Lilloah are capable of building one carriage per day. It means therefore that they required that number of underframes.

President.—That does not prove anything. You may have the capacity to build 100,000 wagons. That does not establish anything. My point is this. There is no evidence that they require as many as 250 underframes in a year.

Mr. Balfour.—We think that they require many more than that number.

President.—We cannot get any figures.

Mr. Balfour.—About two years ago, the Railway Board sent out an enquiry for 575 underframes, but it was afterwards recalled for the reason that the I. R. C. A. design for underframes was not considered satisfactory. The actual enquiry however was for 575, but that was only one enquiry.

President.—You must remember that for many years they had not done anything in respect of additions or replacements. When once they have caught up the arrears so to say, there may not be such a big demand.

Mr. Balfour.—There is a demand for at least 250 underframes in India. We would think that the minimum would be 600.

President.—I am not sure about the figure.

Mr. Balfour.—We are not either, but our opinion is that the minimum would be 600.

President.—There is no fixed programme as far as I understand about underframes and therefore your complaint that orders are irregular has been more or less admitted by the Railway Board but their reason is that the Railway Companies get these underframes as and when they like. Supposing there cannot be any certainty as to getting regular orders, what would be your position?

Mr. Balfour.—We will endeavour to get more wagons. We would do 1,500 wagons a year.

President.—Is it necessary to manufacture these underframes? Could not you manufacture additional wagons instead of wanting to manufacture underframes when you cannot get a sufficiently large order?

Mr. Balfour.—If there were no underframes orders to be had we would go in for additional wagons.

Dr. Mathai.—That is to say without any change to your equipment for underframes, you could turn that to wagon building.

Mr. Balfour.—Quite.

President.—It seems that the railways themselves do not know what the demand is and there are 1,001 uncertain factors. You are trying to do something which economically at present is not very satisfactory.

Mr. Balfour.—When the new standard design is approved for the underframes we think we would be in a good position to manufacture them economically.

President.—Would it not be better for you to do something for which there is already a demand in the country, for which the demand is more certain, instead of trying to do something which is more irregular and uncertain?

Mr. Balfour.—There is a greater demand for underframes in the country than the manufacturers can build.

President.—That may be so if there is a regular demand. But it is the opinion of the Railway Board that the demand is not very regular. This is what they say. Our question was " As regards the statement that orders are not called for at regular and stated times each year, the Board would be glad to know if this statement is correct " and our next question was " if the statement that the orders for carriage underframes are small as compared with those for wagons is correct, the Board would be glad to know the reasons which prevent larger orders for carriage underframes being placed " and this is their reply:—" The Indian Railways place orders for all the underframes that they need for additions and renewals to coaching stock. The number is ordinarily much smaller than the number of wagons required as additions to or replacements of goods stock."

Mr. Balfour.—The number required would be much smaller relative to the number of wagons required, but nevertheless the number would actually be large.

President.—But the point is that the railways themselves get their underframes as they want, and therefore it means that the Railway Board has less control even on State-managed railways as regards underframes than as regards wagons.

Mr. Balfour.—That is so, but nevertheless there is a greater demand for underframes than we can satisfy.

President.—We have got the replies of the Railways from which we will be able to find out actually what their requirements are but we have not had time to go through all of them.

Mr. Balfour.—We will get that from the Railway Administration Reports also but we don't think that you need be frightened that the demand is not there for all that Indian manufacturers can build.

President.—Then, you make three proposals about underframes on page 237 of the blue book. The first is " It is obvious that we first require protection to the extent of the burden on our raw material ". We want to know exactly what that means.

Mr. Balfour.—We did give you that in the last evidence (see page 342 of 1925 Evidence Volume).

President.—What I want to get some idea as to what it means.

Mr. Balfour.—We will work it out afresh.

President.—But you must make a distinction. The British manufacturer has also got to pay a duty.

Mr. Balfour.—Of 10 per cent.

President.—Yes, and what you have got to show is that you have got to pay so much duty at the rate of so much per ton while the British manufacturer pays 10 per cent. *ad valorem* on that. That is what you have got to show first and then the disadvantage at which you are compared to him.

Mr. Balfour.—Yes.

President.—Then as regards unprotected material of course you can calculate at the rate of 10 per cent. in both cases.

Mr. Balfour.—Yes.

President.—The second is " We require protection to encourage the placing with us of larger orders, because the industry cannot be developed if we get only small orders and those at uncertain and irregular intervals ". As regards that, I have told you what the position of the Railway Board is. What is the smallest number that you can reasonably do with?

Mr. Balfour.—150 to 200.

President.—Would that lead to economic production?

Mr. Balfour.—Yes.

Mr. Mathias.—In the Report of the Committee on Railway Workshops, I notice a paragraph in which they say that the work in their shops is very much held up because they cannot get their delivery of underframes from firms in India. Have you any comments to make on that?

Mr. Balfour.—Our last order was finished five months before the promised delivery dates.

Mr. Mathias.—I take it that that comment of the Committee did not apply to your firm.

Mr. Balfour.—No.

Mr. Mathias.—There is also a recommendation that the workshops should undertake the manufacture of their own underframes. How far would that affect you?

Mr. Balfour.—The market for our underframes would be closed if the proposed railway shops are equipped to manufacture all the Railway's requirements.

Mr. Mathias.—When they make as many as recommended in that report, it will completely swamp your market.

Mr. Balfour.—Yes.

Mr. Mathias.—If the recommendation of that Committee goes through, there would be no industry to protect in India.

Mr. Balfour.—It would kill private enterprise entirely. It is against the avowed policy of the Government to interfere with private enterprise.

President.—You are not putting the Government point of view correctly; they won't manufacture these things to come into the market and compete with you. There is nothing in the Government policy against their making things themselves for their own use.

Mr. Balfour.—Time and again they have given an assurance to the Engineering Association that they would not interfere with private enterprise.

President.—If they manufacture underframes and sell in the country, that is interfering.

Mr. Mathias.—When they compete against the public that is interference?

Mr. Walker.—They are competing against us. What Government actually said was that the railway workshops would be restricted to their primary purposes, namely the repair and maintenance of their rolling stock.

President.—Where did they say that?

Mr. Walker.—We will send it along to you.

President.—You cannot prevent Government or anybody from making things for themselves.

Mr. Balfour.—It is surely against the policy of any Government to restrict private enterprise. Otherwise where are they going to get competition? How will they know that they are manufacturing underframes economically?

President.—Whether the Government should manufacture articles is a matter of policy with which we are not concerned. You cannot say that there is any objection to Government or the railways manufacturing things in their own workshops for themselves. There is no competition against you; they do not come into the market?

Mr. Balfour.—Why not? Here we have got a shop in existence in which we can manufacture underframes. It means that if they are going to manufacture underframes we will have to close down. That is interference.

President.—One railway building underframes for another railway, that I can understand. Then there is objection, but a railway doing the work for itself—that may be bad business—but you cannot say it is competing against private enterprise.

Mr. Walker.—They have actually taken from us orders for points and crossings, and have transferred them to the workshops of another Railway.

Mr. Balfour.—What they recommend in the Workshops Committee's report is that they should put up shops to build underframes for the whole of the State Railways.

President.—I am not concerned with what they say. The point is that the argument you are putting forward is not a very sound one.

Mr. Walker.—Take the order for points and crossings for the North Western Railway. The order was placed with us but it was afterwards taken away from us and given to Jamalpore.

President.—There might be some reason for that.

Mr. Walker.—The reason apparently was that Jamalpore was a little short of work. If they are going to build these workshops on a much bigger scale, it is in direct conflict with what the Government of India assured us, namely that the Government workshops would be restricted to repairs and maintenance.

President.—As regards underframes we have got even less material to judge whether you need any protection or how much you need. You simply say that you want a bounty, Rs. 1,250 going down to Rs. 500. On what material are we to make that recommendation?

Mr. Balfour.—We would put forward the same arguments as we did during the last enquiry. We then gave details of the 106 underframes that we built (Page 334 of the 1925 evidence Volume regarding grant of Supplementary Protection).

President.—There you gave your various charges no doubt but we really do not know where you got the cost of fabrication, Rs. 3,693. How are we going to work out the costs?

Mr. Mather.—Since you put in this statement in the previous enquiry you have had further experience with the other order of which you have given us details. Has your fabrication cost been lower?

Mr. Balfour.—Our cost sheets are not finished yet.

President.—This is what the Board reported at page 52 of their Report on the grant of Supplementary Protection to the Steel Industry "On the whole, we think that Rs. 600 on each broad-gauge underframe is a reasonable estimate of the assistance needed. Out of this sum Rs. 265 is compensating protection on account of the duties on steel, and the balance (Rs. 335) is substantive protection. The Indian manufacturer has then a margin of Rs. 535 (*i.e.*, Rs. 335 *plus* Rs. 200) and, if British prices do not fall further, his profit would be about 5½ per cent. on the cost of the underframe." Messrs. Burn and Company, Ltd. suggested that Rs. 1,250 on each broad-gauge underframe and Rs. 750 on each metre gauge underframe would be fair, but we do not think the facts placed before us justify these amounts. Well we have not got any more evidence than the Board then had and you still ask us to make a different recommendation. Have you got any further information?

Mr. Balfour.—Why not take the import price of G. I. P. underframes and compare that with our quotation?

Mr. Mathias.—Compare your tender with the British and continental tenders, that is what you mean?

Mr. Balfour.—Yes. Our quotation was made in response to one of the most recent tenders called for in India. I think that would give you a very good idea.

President.—How much did you get for your underframes after our report?

Mr. Balfour.—We have got no orders since the report.

President.—What about the 5 E. I. R. underframes?

Mr. Balfour.—About Rs. 11,000 but as already explained these are special frames.

President.—And for the 137 what was the price you got?

Mr. Balfour.—Rs. 9,418.

Dr. Matthai.—This was for last year's E. I. R. underframes?

Mr. Balfour.—Yes.

President.—Under your proposal that would have to be increased by Rs. 1,250, that is what it comes to. Supposing you had an order, is it your contention that on top of Rs. 9,418 you want Rs. 1,250?

Dr. Matthai.—On page 341 of last year's evidence you gave your cost without step irons as Rs. 8,891. Take step irons at Rs. 253. You estimated on that quotation a loss of Rs. 275. Add that Rs. 275. That would give you no profit. Add a profit of Rs. 200. That gives you Rs. 9,619. We are trying to put that on the same footing with your G. I. P. quotation. Did your quotation of Rs. 8,891 include hand brake and lighting equipment?

Mr. Balfour.—We don't think it did.

Dr. Matthai.—Roughly, you said, Rs. 400 represents the increased cost on the G. I. P. underframe. Add that and your actual quotation comes to Rs. 10,283. Can you explain the difference?

Mr. Balfour.—The difference is in the material.

Dr. Matthai.—Has the material gone up in price?

Mr. Balfour.—The materials have increased by Rs. 540 (Page 247 of the Blue Book and page 341 of last year's evidence).

Dr. Matthai.—That increase in material is due to the fact that your new design involved a larger amount of material, is it not? The position is this. You were in exactly the same position as last year and you should be quoting for G. I. P. underframes at Rs. 10,159. Instead of that you have quoted Rs. 10,283. You still have an excess of Rs. 124.

Mr. Balfour.—The labour on these frames has increased owing to the different design. The difference is 153.

Mr. Walker.—If you compare the figures on page 247 of the blue book and those on page 341 of last year's evidence you get a fair comparison.

Dr. Matthai.—This excess on material, how much is it?

Mr. Balfour.—Rs. 540 on materials, Rs. 153 on labour, Charges Rs. 27 less, and Rs. 200 as profit.

Mr. Mathias.—Is this the comparison between Great Indian Peninsula Railway and East Indian Railway?

Mr. Balfour.—Yes.

Mr. Mathias.—With regard to Great Indian Peninsula Railway underframes do you tender for those?

Mr. Balfour.—Yes.

Mr. Mathias.—You were saying this morning that you were not able to tender lower, because you had to get your material in a very short time so as to secure early delivery.

Mr. Balfour.—Yes.

Mr. Mathias.—And therefore your tender was really higher than it should have been.

Mr. Balfour.—Yes.

Mr. Mathias.—If you had been given some more time you would be able to compete at the same rate as they did.

Mr. Balfour.—There is another factor too. Had we got this extra time we might have done these underframes between the time we finished this order for wagons and before we started on the next order which we hope to get.

Mr. Mathias.—It would have reduced your overhead charges.

Mr. Balfour.—Yes. We don't know the accepted price. It is never published and we thought the Board could get these figures for comparison.

Dr. Matthai.—Practically the difference between East Indian Railway and Great Indian Peninsula Railway types accounts for Rs. 666.

Mr. Balfour.—Taking Rs. 200 as profit.

Dr. Matthai.—Just this difference in type accounts for Rs. 666.

Mr. Balfour.—Yes.

Dr. Matthai.—Then the loss of Rs. 275 *plus* the profit of Rs. 200.

Mr. Balfour.—Yes.

Mr. Mather.—I would like to call your attention to this statement that you have given at page 237. You want a specific duty of Rs. 2,000 on each underframe based on your calculation of British cost of an underframe of £580, and you state that this is a case you dealt with in the evidence in 1925 enquiry. Now this year the only addition that you made to the British cost of the underframe is the duty of 10 per cent. Last year if you look at page 334 of the evidence you added to it landing and election costs. Why should you have omitted this year charges which last year came to a total of Rs. 425 for erection and landing? You seem to have allowed for a still bigger bounty. I think you will admit that as an omission.

Mr. Balfour.—We are asking here for a specific duty of Rs. 2,000 and we are showing you how the specific duties should be made up.

Mr. Mather.—If you ask for Rs. 2,000, you assume that it costs nothing for landing.

Mr. Balfour.—We are simply asking Rs. 2,000 on the c.i.f. You take Rs. 7,714 and add on the landing and erection. It comes to Rs. 8,139. Leave out the 8 per cent. for the moment.

President.—What is the 8 per cent.?

Mr. Walker.—At that time we asked for 8 per cent. profit. If you add 8 per cent. to our price, it comes to Rs. 10,150. The difference is Rs. 2,011. We have asked for Rs. 2,000 on the c.i.f. figure.

Mr. Mather.—Even when you are doing that, you are still omitting the landing and erection charges which should be deducted from it.

Mr. Walker.—We have allowed for that. We have increased the Home Manufacturer's price by Rs. 425 for landing and erection charges bringing his price from Rs. 7,714 to Rs. 8,139. We have given it there in a summarised form.

Mr. Mather.—You have not done that on page 237.

Mr. Balfour.—We have asked for Rs. 2,000 on the c.i.f.

President.—You may ask for Rs. 500 or Rs. 5,000, but I want to know how you got this figure. Where have we got to add it? To what figure have we to add this Rs. 1,250?

Mr. Balfour.—To the Home Manufacturer's Landed price *plus* erection.

President.—Please tell me on what basis. I know the difference between the two is Rs. 1,250. On what basis do you claim this Rs. 1,250? If you say that a specific duty of Rs. 2,000 is added, you will get Rs. 1,250, one can understand. You want Rs. 1,250 in addition to your price. We have not got that price. That is what I want to know.

Mr. Walker.—The price is given on page 334 of the previous evidence.

President.—Rs. 8,910.

Mr. Walker.—Yes.

President.—To that we have got to add Rs. 1,250.

Mr. Walker.—Or in the alternative you may deduct the existing duty from the Home manufacturer's landed price and add Rs. 2,000, and the landing and erection charges.

President.—You have got to get a price of Rs. 9,418.

Mr. Walker.—*Plus* 8 per cent. profit which comes to Rs. 10,150 for the underframe.

President.—In that is included your bounty of Rs. 1,250.

Mr. Walker.—Yes.

President.—That gives you Rs. 8,900.

Mr. Walker.—Rs. 8,910. Add 8 per cent. to our price.

President.—I can't find this figure anywhere.

Mr. Walker.—8 per cent. profit should be added to the Indian cost.

President.—Please explain to me. You said your actual costs are Rs. 9,418. You add 8 per cent. That makes how much?

Mr. Walker.—Rs. 10,171.

President.—That will include Rs. 1,250.

Mr. Walker.—Yes.

President.—Deduct amount?

Mr. Walker.—Rs. 8,921. On the opposite side the price is given as Rs. 8,910. You can work it out in another way. Take the home price at Rs. 9,714 including a specific duty of Rs. 2,000 and add Rs. 425 for landing and erection. It comes to Rs. 10,139. We want that for our underframe.

President.—Your works cost *plus* profit comes to Rs. 10,171.

Mr. Walker.—Yes.

President.—8 per cent. on the all in cost.

Mr. Walker.—Yes.

Mr. Mathias.—Your argument in your application is really a mere repetition of your argument put before the Board last time.

Mr. Balfour.—Practically.

Mr. Mathias.—That argument I want to get quite clear. That argument is really an argument that the protection should be changed in your favour because the exchange rate has increased to 1*s.* 6*d.*

Mr. Balfour.—No. When the 1st Report reviewed the position of the wagon industry, it did not consider underframes. Therefore we had operating against us a duty amounting to Rs. 235 owing to the increased protection given to the Steel industry.

Mr. Mathias.—You put in certain theoretical figures at the last enquiry and you admitted them as theoretical. Now arguing from those figures on the difference in the exchange rate you come to the conclusion that a certain amount of protection is necessary.

Mr. Balfour.—Yes, to compensate us.

Mr. Mathias.—That is your position now.

Mr. Balfour.—Yes.

President.—Take page 385 of the 1925 evidence volume. The f.o.b. price of an underframe is £561. At 1*s.* 4*d.* it is Rs. 9,154-8-0 and at 1*s.* 6*d.* it is Rs. 8,137-5-4. Add the customs duty Rs. 813-11-8, landing charge Rs. 45 and erection charge Rs. 365. The total comes to Rs. 9,360. You are out by the difference between Rs. 9,361 and Rs. 8,910 so that the figure of Rs. 600 fixed by my colleagues was very near the mark.

Mr. Walker.—Rs. 450 is the difference.

President.—You want 1,250 on these figures. You were out by Rs. 450. They gave you Rs. 600. So you got Rs. 1,050 out of Rs. 1,250.

Mr. Walker.—We claim Rs. 1,240 or 1,250. We were wrong by Rs. 450. It means that you should have given us Rs. 800 instead of Rs. 600.

President.—Rs. 600 is reasonably accurate. Rs. 8,137 is the c.i.f. price. On that you have actually got Rs. 1,050.

Mr. Walker.—We have not followed your Rs. 1,050.

President.—You wanted Rs. 1,250, didn't you?

Mr. Walker.—We did.

President.—You were out by Rs. 450?

Mr. Walker.—The difference is Rs. 800. Where is Rs. 1,050?

President.—My colleagues allowed you Rs. 600. You wanted Rs. 1,250. In that there is a difference of Rs. 450. You add that to Rs. 600 and you get Rs. 1,050. There is no 26 per cent. which you try to make out. If you had

got all that you had wanted, you would have got Rs. 200 more and nothing else and that would not be anywhere near 26 per cent. It will come to about 15 per cent. We have got to work on figures. We cannot say that this is what you want and therefore you must get it. First of all this £580 that you took is wrong. So, what is the position now as regards your claim? Anyhow you must bring it down to Rs. 800 against Rs. 600 which we gave you in the last Report.

Mr. Walker.—Take these prices given by us for the G. I. P. underframes and make the comparison.

President.—We are comparing the prices that you have given. We are not inventing any figures. You take a wrong figure and base your claim for protection on that.

Mr. Mathias.—May I ask whether there is any relation between the cost of construction of a wagon and the cost of construction of an underframe?

Mr. Walker.—Yes.

Mr. Mathias.—Does the amount of protection which you consider necessary for wagons bear any relation to the amount of protection for underframes?

Mr. Balfour.—We would not like to say that. We require more for wagons than for underframes.

Mr. Mathias.—Translating it into a percentage on the cost of construction *plus* the overhead, the percentage of protection which you consider necessary in the case of a wagon would be higher than the percentage of protection which you consider necessary in the case of underframes.

Mr. Balfour.—Yes.

Mr. Walker.—The competition is keener for wagons—that is the secret of it.

Mr. Balfour.—The underframes occupy a lot more space and require more handling.

President.—If I were you, I would say that the bounty ought to be Rs. 800.

Mr. Walker.—We shall put in a corrected statement.

Mr. Mather.—In connection with your statement about underframes you have given us on page 247 a list of materials required. On the same page you give a list of imported materials subject to protective duties. The list consists entirely of mild steel channels, angles and tees. Was your reason for importing these that you could not get delivery of these quickly enough in India or that these sizes were not rolled by Tata's?

Mr. Balfour.—The latter was the case.

Mr. Mathias.—You say that of the three schemes you would favour the specific duty. Would you state your reasons definitely so as to have them on record?

Mr. Balfour.—We have put in a special note on that.

Mr. Mathias.—Are your reasons the same?

Mr. Balfour.—Yes.

Dr. Matthai.—You complain of the smallness and irregularity of the underframe orders. As far as underframes are concerned, is not that precisely the thing that gives you an advantage over the foreign manufacturer?

Mr. Balfour.—We don't think so.

Dr. Matthai.—You have always had an advantage with regard to underframes that you don't have as regards wagons in meeting foreign competition.

Mr. Balfour.—There are not so many underframe builders in Britain as there are wagon builders.

Dr. Matthai.—Is it because the orders are so irregular and small that they don't come in competition?

Mr. Balfour.—We would prefer them to be of one design.

Dr. Matthai.—In that case, competition might be more strenuous.

Mr. Balfour.—Yes, but at the same time we would be able to reduce our costs.

Dr. Matthai.—I find from these statements that the Railway Board gave us, except in 1922, there has not been any order for underframes placed abroad on the ground of price.

Mr. Balfour.—Surely there must have been underframe orders placed at home.

Dr. Matthai.—As far as State Railways are concerned, if you look at page 383, you will find in 1922-23 that there were three cases in which the indent was placed on the Director General on the ground of price. In the year 1923-24 there were two cases in which the order went home, but that was entirely on the question of prompt delivery. It was not a question of price. In 1924-25 and 1925-26, apparently orders had been placed here; so that, if you leave out the year 1922-23, as far as prices are concerned, you have not suffered at the hands of foreign competitors.

Mr. Balfour.—We did not build all the underframes required in India throughout that period.

Dr. Matthai.—As far as actual results go, it is very different from wagons.

Mr. Walker.—Is that a statement of all the orders called for at home and in India?

Mr. Balfour.—The Railways might have placed large indents at home before they were taken over by the State.

Dr. Matthai.—The point I want to raise is this. Assuming that you have been able to hold your own as regards underframes and supposing we gave you sufficient protection on wagons to enable you to work to capacity, whether we gave you protection or not on underframes, it would not be a serious proposition.

Mr. Balfour.—It would create a very serious situation. Is it the intention of the Board to restrict the growth of the carriage and wagon building industry? We have asked you in this representation not to take the present capacity into consideration but to allow for development in both the wagon and the underframe industries.

Dr. Matthai.—My difficulty is this. As far as wagons are concerned, we have got the Indian Standard Wagon Company who specialise in one type of wagons and we have got some kind of data. As far as underframes are concerned, we have no kind of data to go upon. Therefore out of consideration for that practical difficulty suppose we said "Let underframes take care of themselves. If the wagon building industry were sufficiently protected, you would not suffer."

Mr. Balfour.—The underframe industry would be killed.

Dr. Matthai.—Our aim here is to develop the industry. The wagon building industry is the same thing as the underframe industry. So, the development does not come in.

Mr. Walker.—If you protect the underframe industry as well, you will be developing both.

Dr. Matthai.—From a practical point of view I don't see that you are going to be hit very badly. No work has been taken away from you since 1922 in spite of all these adverse conditions.

Mr. Balfour.—On the basis of that statement, but we have just pointed out to you that the East Indian Railway have been building coaching stock for over a year since they were taken over by the State. It means that they have been importing underframes. The Great Indian Peninsula Railway might have done the same thing. In this classified list of the Stores Department there are many instance, *e.g.*, points and crossings for the Great Indian Peninsula Railway for which we have never had an enquiry.

Mr. Mathias.—I take it that Continental competition in regard to underframes is out of the question altogether?

Mr. Balfour.—Last year's frames were Continental. We obtained the drawings from the Great Indian Peninsula Railway for the enquiry for the 98 underframes and found they were marked "Germany." We don't know if they called for tenders from the Continent or not in this instance.

Mr. Mathias.—Have you any reason to suppose that the British or Continental price of underframes is likely to go down?

Mr. Balfour.—We cannot say.

Mr. Mathias.—Have you any information at your disposal?.

Mr. Balfour.—No.

Points and Crossings.

President.—I really do not understand what you want for points and crossings. You say "We do not ask so much that the protection originally afforded should be increased; we ask rather that the original measure of protection granted should be restored to its original degree." But you don't explain what you mean by that.

Mr. Balfour.—Our intention was whatever you gave to the fabricated steel you would automatically give to points and crossings.

President.—But that does not give us really any idea as to what you mean. There you tried to show that prices had fallen owing to the rise in exchange and owing to two other causes and therefore you were not getting the amount of protection that we intended you to get. Yesterday we explained to you how difficult it was to get at the nature of the drop so far as the foreign cost of fabrication was concerned. Here also you have not given any recent c.i.f. prices.

Mr. Balfour.—We are unable to get them.

President.—Your contention is that no distinction should be made between fabricated steel and points and crossings, is it not?

Mr. Balfour.—That is right.

Mr. Mather.—It is desirable that we should have rather more definite information about this. You don't even tell us what your own costs are, much less of the price of the imported article.

Mr. Balfour.—The difficulty is that they all vary in price. There are no two railways that have got the same design for points and crossings. There are railways which have got dozens of designs.

President.—I will put it to you this way. In the last enquiry we gave you Rs. 33 as duty on fabricated steel sections and Rs. 29 on fabrication, altogether Rs. 62. Now you want a duty of Rs. 72-8-0.

Mr. Balfour.—Yes.

President.—The only point that really requires consideration is this figure of Rs. 29 substantive protection and there we have got to make adjustments on account of the rise in exchange and how that rise might have brought down your cost of fabrication. Assuming that that figure of Rs. 29 is correct —which I think you accepted as correct—what it comes to is this. Supposing the duty remains the same as before and we say a specific duty of Rs. 33 a ton *plus* the present day equivalent of Rs. 29. That is what you want.

Mr. Balfour.—That is so.

Dr. Matthai.—Can you give us the quantity of materials required in a switch?

Mr. Balfour.—It varies.

Dr. Matthai.—Is there no typical kind of switch?

Mr. Balfour.—It would vary according to design. Each railway has got its own design. Our work is so varied in that department because no two railways order the same type. We believe there was a committee sitting for the standardization of points and crossings. We want standardization so that we may have one type of jigs and dies.

Dr. Matthai.—Since when have you been doing this business?

Mr. Balfour.—15 years to my knowledge.

Dr. Matthai.—You say you have extended and remodelled your works on most modern lines. Since when was that?

Mr. Balfour.—Four years ago.

Dr. Matthai.—During these four years if you take the various types of switches and crossings that you have been manufacturing what is the sort of typical average weight?

Mr. Balfour.—We cannot tell you off hand.

Dr. Matthai.—If you took a weight of that kind and gave us the materials that went into it with their price you don't think it will serve the purpose?

Mr. Walker.—The orders are comparatively small and varied.

Mr. Mathias.—On your present orders I take it that you have a good margin of profit. Obviously when the railways want a small quantity and you know that they want them urgently and cannot get them from home in time, you can charge them a higher price; so that although at present your production is small you should make a good profit.

Dr. Matthai.—Is there no separate entry in the monthly trade returns to show these things?

Mr. Balfour.—We don't know. Talking about points and crossings the Great Indian Peninsula Railway call for tenders from Home and we never get a chance to quote.

Mr. Mather.—Have you at any time had enquiries?

Mr. Balfour.—Once, about three years ago but we did not get the order.

Mr. Mather.—It may be a question of freight on that sort of material. They want delivery in Bombay.

President.—You want us to deal with points and crossings on the same footing as fabricated steel. Assuming that we took those figures that we arrived at in our last enquiry as correct—Rs. 62-8-0, Rs. 33 for duty on steel and Rs. 29-8-0 on fabrication—and assuming that there are no other alterations except this question of exchange on Rs. 29, will you expect us to do anything else?

Mr. Balfour.—Not if you allow for exchange.

President.—The position is this that your costs have come down by Rs. 5. If our former figures were correct and Rs. 62-8-0 gave you enough protection then the specific duty required will be Rs. 57-8-0. It is a good deal less than Rs. 72-8-0, and that ought to give you enough protection subject to any adjustments we may have to make.

Mr. Balfour.—Yes, but you will have to allow for the much greater drop in the Home manufacturer's fabrication costs.

President.—That is to say if the duty had been a specific one you would have been better off by Rs. 5.

Mr. Balfour.—No. We have got an instance of fabricated steel here. It is only this morning that we found it and it is for 53 spans. We hurriedly worked this example in the manner you suggested yesterday and endeavoured to get the home fabricated cost.

President.—You got that contract.

Mr. Balfour.—No.

Mr. Mathias.—Was that for the North Western Railway?

Mr. Balfour.—Yes.

Mr. Mathias.—You got the actual order.

Mr. Balfour.—No. We did not get the order but the North Western Railway kindly furnished us with the price at which the order was placed at Home (copy of letter handed in).

President.—This is a letter you got from the North Western Railway dated 4th February 1926 in which they order 53 girders for the strengthening of the Jhelum bridge. You had better send in copies of this also.

Mr. Balfour.—Yes.

3. MESSRS. JESSOP AND COMPANY, LIMITED.

A.—WRITTEN.

(1) *Letter, dated 11th/14th May 1926, from Messrs. Jessop and Company, Limited.*

Press Communiqué, dated the 16th April 1926.—Before particularizing the nature and amount of protection required for the engineering industry it is proposed to notice the intimate connection this industry has with the industry producing raw material.

The feature of the Tata Iron and Steel Company that renders the undertaking so vitally important to India in times of isolation from countries overseas is that they can produce steel rails and mild steel structural shapes and sections (up to British Standard Specification) that can be fabricated into buildings, bridges, wagons and underframes of quality to fill the requirements of Indian railways and thus enable them to be practically independent of imports.

It will be seen from the above that the engineering industry is the supplement of the steel industry and the value of the one would be discounted by the absence of the other.

A further circumstance for consideration is that the skilled labour required by the one industry is drawn from the same peoples as that drawn by the other.

Tatas roll an untested steel suitable for the minor requirements of the general public. This is a convenience but the material is not of such value to the country as is the tested steel referred to above as it can be largely replaced by many kinds of indigenous timber.

Fabrication of steel as apart from its production.—The fact we have set out to prove is that the conditions affecting the engineering industry *are worse to-day than in 1923 and 1925* and it is essential if Indian Engineering Industries are to be kept alive, that the principle of the Steel Protection Act of 1924 must be extended for a further period.

Based on the evidence put before them, the Board, in their Report of March 1924, arrived at certain conclusions which were accepted by the Legislature. Again in September 1925 further recommendations were made by the Board to meet the changed conditions that had risen in the interim. The Government of India, however, appear to have based their argument for non-acceptance of these recommendations on the fact that the whole question had to come up again for consideration at the present enquiry which was then due to be held shortly afterwards and therefore they could not see their way to make any alteration at the tail end of the period.

Before entering into details of costs of fabricating steel and building wagons and bogie underframes, we desire to state our views with regard to some of the arguments raised during the debate in the Legislative Assembly, on Wednesday, February 17th, 1926.

The main reasons given by the Hon'ble Sir Charles Innes for not increasing the offsetting duty on fabricated steel were:—

(1) Engineering in India is not an infant industry and engineering had been in existence in India for over 100 years, and, therefore, they do not require support.

(2) No record of pressure of imports from abroad.

(3) A set back in the working of an industry for 12 months is of little moment.

In reply to the above we would state:—

(1) Engineering in a sense is not a modern industry in India and a chronicle of our inception and doings for more than a century would disclose the following facts:—

At birth we were recorded as *mechanical* engineers, organised to execute urgent repairs to marine and land machinery..

Time was then a great factor in our favour, as communicating with countries overseas was a slow and tedious business.

In course of time a merchant's business was added to the above and an impetus was given to the infant mechanical engineering industry by a fall in the exchange value of the rupee.

Later, the country was flooded with cheap Continental steel, which, for private consumption, displaced British iron and steel and gave scope in India for structural engineering.

Advantage was taken of the opportunity and *structural* engineering was added to our other activities.

Continental material was found to be unreliable and the advent of open hearth basic steel of British manufacture saw the decline of Continental material.

Our prosperity in the middle half of our history was due largely to our merchant business and to a low exchange value of the rupee.

(2) We have no record of imports later than that given in the Administration Report on Railways, 1924-25, in which it is stated that out of a total expenditure of Rs. 46,00,000 on bridge work, only Rs. 5,00,000 were spent in India. The proportion of imports to local purchase does appear to be larger than might be necessary when it is remembered that the spending department is pledged, other things being equal, to foster a local industry.

(3) Nothing does an industry more harm than blowing hot and cold on it. Move as slowly as it may be considered desirable and let there be a continuity of policy. If it is considered necessary to support an indusrty, do so till it has found support unnecessary. Commercialism will not permit inflated profits to be made for any length of time. Competition, whether by existing competitors, or by fresh comers on the field, will quickly reduce prices to a reasonable basis. Spasmodic bids to establish any industry must result in waste of money, and 12 months lost by an industry is a matter of serious concern.

Fabricated steel, railway wagons and bogie underframes are, with regard to manufacture, in many respects similar to one another, but, to state the facts more clearly, we will deal first with fabricated steel and then with wagons and underframes.

Fabricated steel.—The Board in their Report of March 1924 arrived at the conclusion that a fair average cost per ton of British fabricated steel, excluding duty, was Rs. 250 per ton c.f.i. and that the Indian cost was Rs. 310 per ton including Rs. 33 per ton the specific duty on steel allowing for 10 per cent. wastage.

The details were as follows:—

British c.f.i. cost per ton at 1s. 4d. exchange.

	Rs.
Material *plus* 10 per cent. wastage	160
Conversion at £6 per ton	90
	250

Indian cost per ton at 1s. 4d. exchange.

	Rs.
Material *plus* 10 per cent. wastage	160
Duty *plus* 10 per cent. wastage	33
Conversion	117
	310

The cost c.f.i. of British steel was on an average Rs. 145 per ton during 1923, when exchange was 1*s.* 4*d.*, but this cost has now fallen to Rs. 100 per ton with exchange at 1*s.* 6*d.*

It is more than probable that the average British cost of conversion has fallen from £6 per ton to quite £5 per ton since 1923 as the wages paid to British workmen have been steadily reduced and this makes the position for India even worse, as there has been no reduction in wages in India since the war and the reduction in overhead charges would not reduce the Indian conversion cost by more than 5 per cent., or say, Rs. 117 to Rs. 110. Therefore, a comparison in cost to-day is as follows:—

British c.f.i. cost per ton exchange 1s. 6d.

	Rs.	A.	P.
Material *plus* 10 per cent. wastage	110	0	0
Conversion £5 per ton	66	10	8
	176	10	8

Indian cost including duty.

	Rs.	A.	P.
Material *plus* 10 per cent. wastage	110	0	0
Duty *plus* 10 per cent. wastage	33	0	0
Conversion	110	0	0
	253	0	0

A difference of Rs. 76-5-4 or 43¼ per cent.

The preference we are actually receiving is 25 per cent. on Rs. 176 or Rs. 44 per ton of which Rs. 33 goes to pay the specific duty on steel including 10 per cent. wastage. In fact we are worse off to-day than we were in 1923, for the costs then were as follows:—

British cost.

	Rs.
Material *plus* 10 per cent. wastage	160
Conversion at £6 per ton at 1*s.* 4*d.* exchange	90
	250
Duty 10 per cent.	25
	275

Indian cost.

	Rs.
Material *plus* 10 per cent. wastage	160
Duty 10 per cent.	16
Conversion	117
	293

Rs. 18 per ton against us.

The position to-day after the Tariff Board has been operating for 3 years is:—

British cost.

	Rs.	A.	P.
Material *plus* 10 per cent. wastage	110	0	0
Conversion at £5 per ton	66	10	8
	176	10	8
Duty 25 per cent.	44	2	8
	220	13	4

Indian cost.

	Rs.
Material *plus* 10 per cent. wastage	110
Duty on material	33
Conversion	110
	253

Rs. 32-3-0 per ton against us.

From the above it will be seen that we were better off in 1923 by Rs. 14-3-0 per ton.

We are not aware what the future duty on steel is to be but if, for the sake of argument, we eliminate the question of duty our cost would be reduced to Rs. 220 per ton, and the imported cost to Rs. 176-10-8, a difference of Rs. 43-5-4 per ton, or 25 per cent.

Purchasing Officers throughout the country are particularly loath to divulge the results of tenders and, therefore, we find the greatest difficulty in being able to specify actual examples of orders having been placed abroad at a lower rate than Indian tenders.

Wagons and underframes.—The cost of an imported wagon or underframe bears a different ratio to the local cost than that found to apply to imported and locally-fabricated structural work due to the following causes:—

(1) A large proportion of the cost of a wagon pertains to imported components and this charge is common to both suppliers.

(2) The duty of Rs. 30 per ton on structural steel is increased to Rs. 40 per ton on forging material.

(3) The portion of work that goes to form the underframe of the vehicle has to be reckoned as being work of a slightly more expensive nature than average structural work.

(4) Forgings cost even more to make than the underframe.

(5) Assembling the wagon and completely finishing it is a common charge, both operations being carried out locally.

On November 10th, 1925, we submitted tenders to the Railway Board for various types of wagons and in the *Indian Trade Journal* of February 4th, 1926, the results of these tenders were published, but the sterling f.o.b. figures were not extended into Rupees to show how a comparison was made nor was any information given of the amount of bounty allotted to the orders placed in India. Though a point we particularly noticed is that exchange was taken at 1*s.* $6\frac{5}{32}$*d.* yet in the *Indian Trade Journal* of December 17th, 1925, it is stated that for comparison between Sterling and Rupee tenders exchange should be taken at 1*s.* 6*d.* to the rupee. We naturally feel, therefore, that on this point a fair comparison was not made.

However, orders were placed with us for which we are thankful but the price we had to quote to keep our men together, as we go on to explain, will barely cover our charges.

To show the facts it will be sufficient if we deal with the figures concerning one type of wagon only, and we have chosen the A-1 type, the Board having previously taken this as their basis.

The figures that went to make up the price we should have required were as follows:—

Tata Material.

	Rs.	A.
(1) M. S. Plates and Sheets, 36 cwts. . . .	295	0
(2) Rolled Sections, 51 cwts.	368	0
(3) Forging material, 36 cwts.	259	0
(4) Horn cheeks, 1½ cwt.	11	0
	933	0

British material at 1s. 6d. exchange.

	Rs.	A.
(5) Axle boxes	176	0
(6) Bearing springs	174	0
(7) Buffers	171	0
(8) Vacuum brakes	278	12
(9) Screw couplings	49	8
(10) Buffers and draw springs	101	4
(11) Diagonals	116	0
(12) Bolts, nuts and rivets	200	0
	1,266	8

Summary of cost.

	Rs.	A.
Total material	2,199	8
Trade expenses on material, 5 per cent.	110	0
Labour	650	0
Trade expenses on labour, 80 per cent.	520	0
	3,479	8
Profit	200	0
	3,679	8

In January 1925, the lowest British tender for an A-1 wagon was £180-10-0, f.o.b., which at 1s. 6d. exchange, erected in India, would amount to Rs. 3,277. There was every indication that the lowest British tender in November 1925 would be certainly not more and probably less than £180-10-0 f.o.b. actually as we see now it was £176 f.o.b. subject to a further proportionate reduction under certain conditions.

It would, therefore, have been useless submitting a tender based on our cost *plus* Rs. 200 per wagon profit, so we cut out the profit and quoted Rs. 3,485.

Similarly for the A-2 wagon we quoted Rs. 3,573 against a cost *plus* Rs. 200 per wagon profit of Rs. 3,767.

The British figure £176 f.o.b. we take to represent Rs. 3,139 erected in India made up as follows:—

	£
Price f.o.b.	176
Less proportionate reduction	3·8
	172·2
Freight	19·2
	191·4
	Rs.
Equivalent in rupee at 1s. 6-5/32d. exchange	2,530
Duty 10 per cent.	253
	2,783
Landing	31
	2,814
Erection	325
	3,139

The proportionate reduction taken into account represents Rs. 55, so if this is not allowed for the British price becomes Rs. 3,194.

It is essential to investigate the question of costs still further for if we now compare the British and local costs in detail side by side at say, exchange 1*s.* 6*d.* we arrive at the following:—

——	British Wagon.		Local Wagon.	
Material.				
Fittings	...	1,139	...	1,139
Duty	10 per cent.	113	10 per cent.	113
Structural shapes, plates and sheets	4·4 tons at 120 per ton.	528	4·4 tons at 120 per ton.	528
Duty	10 per cent.	53	Rs. 30 per ton	132
Forging material	1·8 tons at 120 per ton.	216	1·8 tons at 120 per ton.	216
Duty	10 per cent.	22	Rs. 40 per ton	72
TOTAL MATERIAL	...	2,071	...	2,200
Labour.				
Fabricating	4·4 tons at £7= Rs. 92·12 per ton.	408	Rs. 154 per ton	677·6
Duty	10 per cent.	41	*Nil*	...
Making Forgings	1·8 tons at £12 =Rs. 159 per ton.	286·2	Rs. 264 per ton	475·2
Duty	10 per cent.	29	*Nil*	...
Erection	...	325	...	325
TOTAL LABOUR	...	1,089·2	...	1,477·8
TOTAL COST	...	3,160·2	...	3,677·8

The British figure in this case is Rs. 3,160 and though it does not come exactly to the figure Rs. 3,194 on page 15 it is sufficiently close to show the relative material and labour costs of the British and local wagons under the essential headings.

It can be seen from the above that on material, owing to the specific duty on steel, the local manufacturer is at a disadvantage of Rs. 129.

Now, if we assume there is no duty on steel and no 10 per cent. duty on wagons, the two costs are as follows:—

	British.	Local.
	Rs.	Rs.
Fittings	1,139	1,139
Structural shapes, plates and sheets	528	528
Forging material	216	216
	1,883	1,883
Fabricating	408	677·6
Making forging	286·2	475·2
Erection	325	325
	2,902·2	3,360·8

However to arrive at the dutiable amount on the British wagon, the cost of landing and erection, *viz.*, Rs. 356, must be deducted making Rs. 2,546-2 as the c.f.i. cost against the local figure Rs. 3,004·8 after deducting the same Rs. 356. A difference of Rs. 458·6 per wagon or 18 per cent.

We make the cost of a local underframe to be Rs. 10,269 made up as follows:—

	Rs.
Tata material as per List A attached (page 18)	2,130
British material at 1*s.* 6*d.* exchange as per List A attached (page 18)	5,006
	7,136
Trade expenses on material, 5 per cent.	357
Labour	1,290
Trade expenses on labour, 80 per cent.	1,032
	9,815
Profit	454
	10,269

In the same way the figures for a standard imported bogie coaching underframe may be reckoned as under:—

	£
Price f.o.b. of a 67 ft. underframe	540
Freight and charges	40
	580

	Rs.
Equivalent rupee price at 1*s.* 6*d.* exchange	7,733
Duty 10 per cent.	773
Landing	153
Erection	350
	9,009

Reducing the price Rs. 9,009 to its elements of cost of material and labour and comparing it side by side with the cost of a local underframe, the following differences will be arrived at:—

Underframes.

——	British Cost.		Local Cost.	
Material.		Rs.		Rs.
Fittings	...	4,551	...	4,551
Duty	10 per cent.	455	10 per cent.	455
Structural shapes and plates	9·5 tons at 110*s.* per ton.	1,045	9·5 tons at 110*s.* per ton.	1,045
Duty	10 per cent.	104·5	Rs. 30 per ton	285
Forging material	5 tons at 120*s.* per ton.	600	5 tons at 120*s.* per ton.	600
Duty	10 per cent.	60	Rs. 40 per ton	200
	...	6,815·5	...	7,136
Labour.				
Fabricating Underframes	9·5 tons at £27 =Rs. 92·12 per ton.	881	Rs. 154 per ton	1,463
Duty	10 per cent.	88	*Nil*	...
Making Forgings	5 tons at £12— Rs. 159 per ton.	795	Rs. 264 per ton	1,320
Duty	10 per cent.	79·5	*Nil*	...
Erection	...	350	...	350
TOTAL	...	2,193·5	...	3,133
TOTAL COST	...	9,009	...	10,269

In this case owing to the specific duty on steel the local manufacturers is at a disadvantage of Rs. 320-8 on the cost of material.

Now, if we again assume no duty on steel and no 10 per cent. duty on underframes, the two costs are as follows:—

	British. Rs.	Local. Rs.
Fittings	4,551	4,551
Structural shapes and plates	1,045	1,045
Forging material	600	600
	6,196	6,196
Fabricating underframes	881	1,463
Making fittings	795	1,320
Erection	350	350
	8,222	9,329

Similarly to arrive at the dutiable amount the cost of landing and erection, *viz.*, Rs. 503 must be deducted making Rs. 7,719 as the c.f.i. cost against the local figure Rs. 8,826 after deducting the same Rs. 506.

A difference of Rs. 1,107 per underframe or 14·3 per cent.

General.

Any support given by a country towards the establishment of a steel industry on a commercial basis is justifiable on two major counts.

(1) *For its commercial value.*—Such an industry converts large quantities of valueless ores into profitable material and in the process provides a living for great numbers of people and furnishes thousands of tons of freight for railways.

(2) In times of isolation such an industry has an inestimable value if the country can *rely* on the industry to produce structural steels up to British Standard Specifications and *on an Engineering industry to fabricate such material.*

It will be seen from the above that the best results from the steel industry can only be got if there is an efficient engineering industry in existence to utilize its products. This being so, the engineering industry must be considered as a supplement of the steel industry and as such cannot be neglected.

The following paragraph is an extract from the " Statesman," dated the 5th May 1926, on the subject of Stores purchases:—

" Bombay merchants on Customs refund."

" Bombay, May 3rd.

" The Committee of the Indian Merchants' Chamber have addressed the Government of Bombay drawing their attention to the fact that the system of refund of Customs Duty on stores imported on Government account was acting as a temptation for purchasing the stores abroad to the detriment of indigenous industries, and emphasising the urgency of making rules for purchasing all stores by rupee tenders in the country, as this was the only way in which Indian trade and industry could have a fair play as against foreign competition."

We attach the utmost importance to a rupee tender for all and payment on delivery in India for we are still convinced that the various purchasing officers have not the necessary information beside them to discriminate between the exact costs of goods purchased f.o.b. and those delivered at site in India. In addition to which payment f.o.b. gives a distinct preference to the manufacturers abroad.

Any assistance by way of a bounty on wagons and underframes as administered at present carries with it an element of chance and uncertainty that should not exist. Therefore we have always maintained and still maintain that any protection given should be in the form of a duty.

To summarise our conclusions we suggest that assistance required by our industry is as follows:—

(1) Structural steel bars, shapes and plates to enter the country free any protection given to the steel industry to be in the form of a bounty. If this on financial grounds is impossible then the duty on steel should be kept as low as possible and the balance made good by a bounty.

(2) Impose a Tariff of 25 per cent. on fabricated steel when steel is duty free.

(3) Impose a Tariff of 20 per cent. on wagons when steel is duty free.

(4) Impose a Tariff of 15 per cent. on underframes when steel is duty free.

(5) Government to refrain as far as possible from entering into competition with private enterprise.

(6) All Government requirements to be purchased at rupee prices, for delivery in India in the condition required by purchaser as f.o.b. purchases cause Government to enter into competition with private enterprise in all the intermediae stages between delivery f.o.b. and bringing such purchases into use in India.

(2) *Letter from Messrs. Jessop and Company, Limited, dated the 13th May 1926.*

In attention to your telegram No. 237, dated the 12th May 1926, we quote as under the prices we paid for steel castings for wagons and bogie carriage underframes during the last three years.

——	1924.	1925.	1926.
	Rs A. P.	Rs. A. P.	Rs. A. P.
Cast steel axle boxes imported . .	18 1 0 each	18 1 0 each	18 12 0 each
Other steel castings for bogie underframes.	33 0 0	per cwt. .	Local purchase.

We would mention we have since had a quotation of Rs. 14 per cwt. for the steel castings bought locally at Rs. 33 per cwt.

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(3) *Letter from the Tariff Board to Messrs. Jessop and Company, Limited, dated the 17th May 1926.*

In your letter, dated the 13th May 1926, sent in reply to the Tariff Board's telegram No. 237, dated the 12th May 1926, you give the price paid by you for imported cast steel axle-boxes as Rs. 18-1-0 in the years 1924 and 1925, and as Rs. 18-12-0 in 1926, whereas your representation to the Board, dated the 24th July 1925, gives the price of an imported axle box as Rs. 54, *vide* page 306 of the Volume of Evidence recorded during the Enquiry regarding the Grant of Supplementary Protection to the Steel Industry. It is obvious that this price of Rs. 54 cannot be compared with those of Rs. 18-1-0 and Rs. 18-12-0, and that the former must include the cost of additional articles such as bearings, etc. I am directed to ask you if you will be kind enough to explain the matter to the Board by pointing out exactly the number of articles and their price, which were included in the quotation of Rs. 54 and in those of Rs. 18-1-0 and Rs. 18-12-0. Please state whether the prices (in all cases) are c.i.f. or landed in India.

In the same letter you state that you have received "a quotation of Rs. 14 per cwt. for the steel castings bought locally at Rs. 33 per cwt." Please state the date of the quotation and of the local purchase. In enclosures IV and VI at pages 306 and 308 of the Evidence Volume referred to above the prices of both imported and locally purchased castings are stated to be Rs. 40 per cwt. The Board will be glad if you will explain the apparent disparity between these prices and those now quoted.

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(4) *Letter from Messrs. Jessop and Company, dated the 21st May 1926.*

Referring to your letter No. 255, dated the 17th May 1926, we give below the information asked for.

The price of Rs. 54 each quoted in our representation to the Board, dated the 24th July 1925, was for complete axle-boxes of British make landed in India.

Each box consisted of:—

1 steel casting of axle-box for 10″×5″ journal.

1 steel casting of lid for above.

1 bronze bearing for above.

1 upper pad for bearing.

1 dust shield

All the above were machined and fitted ready for use.

We ordered complete axle-boxes and have no record of separate prices for the components.

The prices Rs. 18-1-0 and Rs. 18-12-0 each quoted in our letter, dated the 13th May 1926 were for steel castings* of axle-boxes and lids only without bearings, pads or dust shields.

These prices are for the goods landed in India.

The date of our order on Hukumchand's Steel Foundry for steel castings for bogie carriage underframes was 18th June 1924 and the rate was Rs. 33 per cwt. for rough castings.

The rate of Rs. 40 per cwt. referred to at pages 306 and 308 of the evidence volume dated 1925 was for steel castings machined where necessary.

The rate of Rs. 14 per cwt. for rough steel castings landed in India for bogie carriage underframes was taken from a tender dated April 15th, 1926, from the Henricot Steel Foundry, Belgium.

If the explanations given above are still incomplete we shall be pleased to supply any further information you may require.

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(5) *Letter from Messrs. Jessop and Company, Limited, dated the 24th May 1926, giving replies to questionnaire regarding wagons and locomotives.*

Referring to your circular letter No. 250, dated the 15th May 1926, we send you enclosed our reply (with 6 spare copies) to your questionnaire relating to steel castings and spring steel required for the manufacture of coaching underframes and wagons, and trust the information will be found useful.

Reply to Tariff Board's questionnaire relating to steel castings and steel springs for coaching underframes and wagons.

(1) List of principal steel castings required for underframes and wagons.

As per your list (*b*) with the addition of cast steel sole bar stiffeners.

(2) The castings have all been standardised by the I. R. C. A.

(3) There is no inherent difficulty in the process of manufacture or in obtaining raw material to prevent the economic production in India of (*a*) the castings specified above and (*b*) spring steel.

(4) Weight of material per vehicle.

	Cwts.
(I) Steel castings per underframe	38
Steel castings per wagon	4
(II) Spring steel per underframe	20
Spring steel per wagon	8

(5) Steel castings and springs used by us during the year.

	1922-23.	1923-24.	1924-25.	1925-26.
	Cwts.	Cwts.	Cwts.	Cwts.
Steel castings local	*Nil.*	*Nil.*	2,248	*Nil.*
„ „ imported	1,074	900	510	1,900
Springs imported	1,440	2,400	1,700	3,952

(6) The price of the local rough castings was Rs. 33 per cwt. The imported castings were axle-boxes at an average cost of Rs. 24 per cwt. *machined* where necessary.

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* Continental.

All prices are landed costs including duty.

The imported axle-boxes 1922-23, 1923-24 were of British make, those imported since were continental.

The same remarks regarding source of origin apply to the laminated springs.

The cost of the continental laminated springs may be taken at Rs. 15 per cwt. landed in India.

(7) We do not contemplate the manufacture of steel castings in India.

The average of bad castings in our Iron Foundry is 5 per cent.

(8) Our experience of local steel castings is unfortunate inasmuch as we were probably comparing a first effort with the output from old established overseas steel foundries.

We have no experience of locally made spring steel. This commodity has not yet been produced locally to our knowledge in commercial quantities and we have not had an oppqrtunity of testing the samples made by way of experiment.

(9) Since placing our order with The Hukumchand Electric Steel Works for steel castings for Bogie underframes in 1924-25 we have not approached them formally regarding prices for bogie castings and axle-boxes, but in a friendly way, current prices of Rs. 14 per cwt. for the former and Rs. 18 each for the latter have been reported to their Manager who realised that he cannot compete against such quotations and agreed that asking him to quote would serve no useful purpose while such a great disparity between imported and local prices existed.

(6) *Letter from Messrs. Jessop and Company, Limited, dated 9th July 1926.*

Your Circular Letter No. 293, dated the 25th May 1926. We agree that the Tariff Board should have full information regarding our costs of building wagons and underframes but are sorry we are unable to furnish the particulars required in exact accordance with the sample cited for our guidance.

The Tata Iron and Steel Company are a self-contained organization with an output that can be costed at any time at a rate per ton on the lines followed by the Board in Chapter V of their first report on the steel produced at Jamshedpur, whereas not only do wagon orders overlap from one year to another but we have three separate works taking part in building wagons and underframes and a further complication arises when more than one type of wagon are going through our Works at the same time.

In these circumstances we have had to adopt the following method of showing our costs, profits, block and capital employed all as per the statements enclosed.

Appendix I shows the prime cost of wagons and underframes built and in course of construction since the end of the War according to their order numbers. The total of these costs is Rs. 66,75,965 less Rs. 1,88,943 : wagons not finished and not billed =Rs. 64,87,022 against bills amounting to Rs. 79,44,922.

Appendix II shows the source of origin of the material, their quantities and their costs, prepared as required by the Railway Board, who ruled that exchange for imported material should be that ruling on the first working day of the month succeeding the month on which the steamers carrying the goods arrive in the port of Calcutta. Such rates of exchange and dates of arrival of steamers being taken from the Bengal Chamber of Commerce weekly circular letter.

While this method has been adopted in Appendix II in order to make the statement agree with the figures we have already submitted to the railways concerned, the figures in Appendix I show the actual amounts paid by us.

Appendix III shows the total debits against Garden Reach Works during the time under reference, from which it will be seen that the on-cost during that period has averaged 23½ per cent. on total prime cost.

Appendix IV shows the replacement and book values of buildings and block, also a note on working capital.

The book value of the land was down in our books at Rs. 29,000, it has since been sold for Rs. 8,15,000, and we reckon the replacement value is as shown in this appendix.

The book value of the buildings and plant are written down to extremely low figures and the replacement values shown by us in the appendix are based on pre-war figures, which may be taken as at least 25 per cent. lower than present values.

Appendix V shows costs of establishment. We gather you want this expenditure to show the cost of the European element in our works separately and we have divided up our costs accordingly.

Depreciation.—The amount charged in respect of this account is 5 per cent. per annum on buildings and machinery, reckoned on their replacement value, and 20 per cent. on Motor Cars and Typewriters and we think these percentages provide a reasonable reserve for the purpose.

Replacement values.—These are kept at pre-war figures in order to preserve uniformity in values and although present prices are higher, pre-war figures must prevail again in the near future.

Working Capital.—This is got from our general account and while our revenue figures are kept separate we have no interest account as between our various departments. All departments draw on a general fund.

The general fund referred to above consists (in confidence) of a nominal capital of £400,000, converted from rupees to sterling at 1*s.* 4*d.* exchange, split up as under:—

	£
6 per cent. Preference shares	120,000
Ordinary shares	260,000
Amount of ordinary shares not called up . . .	20,000
	400,000

Manufacturers Profits.—We consider 10 per cent. would be a reasonable profit reckoned on the actual replace value and working capital of the industry. In the case of wagon building, an average working capital of Rs. 21,60,195 is indicated in Appendix IV.

The average overhead trade expense shown in Appendix III is 23½ per cent.

The total trade expense for wagons shown at foot of page 13 of our letter to the Tariff Board, dated 11/14th May 1926, is 22 per cent. as under:—

	Rs.
Material and labour, Rs. 2,200+650	=2,850
Trade expenses, Rs. 110+520	= 630
=22 per cent.	

In the same way the overhead trade expense on underframes may be seem from the lower statement on page 17 of our letter as follows.—

	Rs.
Labour and material, Rs. 7,136+1,290 . . .	=8,426
Trade expenses, Rs. 357+1,032	=1,389
=16½ per cent.	

It will be seen from the above that we are working to attain a lower trade expense than has averaged over the last six years.

Continuity of Orders.—It is difficult to secure this. The Railway Board wrote us on the 15th June 1926 informing us their call for tenders for standard wagons has had to be postponed in order to enable them to adopt a revised type of wagons.

They offer to call tenders for metre gauge wagons but these do not lend themselves to mass output on account of lack of despatching facilities.

Tata's Prices.—Since writing the foregoing we have had an offer from The Tata Iron & Steel Co. to supply steel to us at a base rate of Rs. 125 per ton for Structural steel for quantities up to 200 tons per month for three months.

Their base price for wagon material being Rs. 12 per ton higher than this base rate.

APPENDIX I.

Final Stage of Analysis of Costs for the Month of 192 .

Date of order.	Order No.	Folio in Cost Book.	——	Materials. Direct Imports.	Direct Purchase.	Bazar Purchases.	Stock Issues.	Issued Cost.	Iron and Brass Castings.	Contract labour.	Daily labour.	Total.
				Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.
March 1921. 100 Metre Gauge Wagons .	6193M/G	M. & S. M. Ry., 16' M. G., 100 Covered Goods Wagons.	1920-21	78,716 10	..	19,957 14	..	..	..	..	..	98,674 8
	34 wagons		1921-22	1,48,177 0	..	Cr. 124 10	728 13	2,092 11	961 12	4,938 5	..	1,57,273 15
	66 "		1922-23	23,543 12	..	1,666 14	Cr. 920 12	9,600 3	..	28,450 5	395 15	59,136 5
Total .	100		1923-24	..	..	100 0	124 5	1,625 2	136 6	13,804 11	1,793 8	18,504 0
				2,50,437 6	..	22,520 2	Cr. 67 10	10,218 0	1,098 2	47,193 5	2,189 7	3,33,588 12
June 1922, 50 B. G. C. Goods Wagons .	6921 M/G	Madras Port Trust, 23-30 Covered Goods Wagons.	1921-22	8,756 9	..	..	..	..	..	..	..	8,756 9
	50 wagons		1922-23	1,12,237 0	..	9,986 0	3,269 5	176 12	157 15	15,748 6	241 9	1,41,857 0
			1923-24	..	..	..	Cr. 1,916 14	26 15	..	71 11	..	Cr. 918 4
				1,20,993 9	..	9,986 0	2,292 7	203 12	157 15	15,820 1	241 9	1,49,695 5
April 1924, 85-67 ft. Underframes .	6167 L/G	N. W. Ry., 67-85 underframes.	1923-24	17,516 5	1,99,133 2	21,283 11	12,515 0	4,995 13	2,099 11	12,505 6	386 3	2,70,435 1
	82		1924-25	2,62,027 11	6,247 10	98,234 14	4,601 9	84,616 3	224 9	73,425 5	3,611 11	5,33,079 8
	3		Up to March 1925.	44 6	..	803 6	Cr. 3,812 4	1,600 6	0 5	1,476 11	218 9	731 7
Total .	85			2,79,588 4	2,05,380 12	1,20,321 15	13,704 5	91,212 6	2,324 9	87,407 6	4,216 7	8,04,246 0
July 1924, 300 B. G. Covered Goods Wagons.	379 K.	E. I. Ry., 5' 6", 300 B. G. Covered Goods Wagons.	1923-24	..	30,662 15	..	3,076 9	3,289 7	1,207 13	..	..	37,636 12
	255		1924-25	3,94,606 9	2,87,107 2	40,151 13	2,493 5	2,25,297 7	1,463 15	1,17,024 7	578 13	10,68,725 5
	45		Up to March 1926.	..	Cr. 17,696 14	1,544 6	Cr. 3,797 10	9,477 15	25 14	17,933 13	211 12	7,699 4
	300 wagons.			3,94,606 9	2,99,473 3	41,696 2	1,774 4	2,38,064 13	2,697 8	1,34,958 4	790 9	11,14,061 5

Final Stage of Analysis of Costs for the Month of 192

Date of order.	Order No.	Folio in Cost Book.	—	Materials.								
				Direct Imports.	Direct Purchase.	Bazar Purchases.	Stock Issues.	Issued Cost.	Iron and Brass Castings.	Contract labour.	Daily labour.	Total.
				Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.
April 1920, 27-6½' Underframes	0787 L/G.	N. W. Ry.	1919-20	..	..	..	4,139 12	1 10	..	1,033 0	81 0	5,255 6
	16 Bogies.		1920-21	4,61,467 13	..	786 4	6,797 10	5,861 7	..	7,393 10	396 8	4,82,913 4
	11 ,,		1921-22	26,319 11	..	1,581 1	Cr. 3,359 9	6,385 4	1,325 1	14,387 12	734 11	47,373 15
TOTAL	27		1922-23	339 6	..	493 2	„ 468 0	605 9	..	5,409 6	580 2	6,959 9
			1923-24	..	..	..	„ 552 0	..	..	..	..	Cr. 552 0
			1924-25	Cr. 430 11	..	..	..	..	..	..	..	„ 430 11
				4,87,696 3	..	2,860 7	5,957 13	12,853 14	1,325 1	28,223 12	1,792 5	5,40,619 7
August 1920, 108 Standard 23' 0" Wagons	0945 J/G.	O. & R. Ry.	1919-20	..	..	..	17,805 9	27,493 4	..	1,105 14	12 0	46,476 11
			1920-21	7,14,509 7	..	1,486 0	18,484 10	505 12	312 14	18,772 6	629 2	7,51,700 3
			1921-22	86,034 0	..	5,631 10	Cr. 23,564 15	6,217 0	1,479 11	43,681 5	1,282 10	1,22,761 5
	108 Wagons.		1922-23	Cr. 1,838 7	..	32 0	„ 2,805 11	421 9	..	4 8	..	Cr. 4,186 1
			1923-24	..	..	..	„ 1,116 8	3 7	..	17 0	..	„ 1,096 1
			1924-25	13,398 4	..	..	..	..	..	..	..	„ 13,398 4
				7,85,306 12	..	7,149 10	5,803 1	34,641 0	1,792 9	63,581 1	1,923 12	9,02,257 13
August 1920, 164 Metre Gauge Wagons	0946 M/G.	M. & S. M. Ry.	1919-20	..	..	..	833 13	12,293 5	..	..	..	13,127 2
			1920-21	3,59,190 7	..	..	2,925 5	35,465 10	1,460 9	1,242 2	7 2	3,91,291 3
	25 Wagons.		1921-22	2,07,847 1	..	5,688 2	1,175 10	17,059 14	593 13	34,744 6	571 15	2,67,080 13
	139 ,,		1922-23	..	..	3,233 9	Cr. 1,919 5	11,097 11	264 7	35,713 13	2,569 6	50,877 9
TOTAL	164		1923-24	..	..	53 9	„ 61 12	2,667 7	116 7	1,080 0	..	3,879 3
				7,58,037 8	..	8,975 4	3,085 3	78,393 15	2,435 4	72,780 5	3,148 7	9,26,855 14

Final Stage of Analysis of Costs for the Month of 192 .

Date of order.	Order No.			Materials.								
				Direct Imports.	Direct Purchase.	Bazar Purchases.	Stock Issues.	Issued Cost.	Iron and Brass Castings.	Contract labour.	Daily labour.	Total.
				Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.
July 1920, 16-67' Bogie Underframes, E. B. Ry.	895 G	9 Bogies	1919-20	..	..	..	..	..	..	30 9	1 3	30 12
		7 "	1920-21	2,63,062 8	..	9,614 0	2,228 5	872 13	..	4,214 1	73 4	2,70,547 13
	Total	16	1921-22	Cr. 2,749 2	..	2,419 7	Cr. 1,788 13	1,593 11	736 2	8,456 6	340 0	8,907 11
			1922-23	81 15	..	444 0	.. 207 2	2,120 11	..	2,710 5	183 0	5,332 13
			1923-24	..	..	..	.. 15 0	..	..	5 5	..	Cr. 9 11
			1924-25	Cr. 430 11	..	..	..	..	..	..	..	Cr. 430 11
				2,59,964 10	..	2,960 5	297 6	4,497 3	736 2	15,425 10	597 7	2,84,388 11
July 1921, 150-A. 3 Wagons, E. B. Ry.	97 G	39 Wagons	1920-21	5,63,041 13	..	21,175 9	479 1	356 0	542 7	4,226 3	..	5,89,821 1
		111 "	1921-22	2,93,461 7	..	9,635 3	Cr. 12,629 13	8,389 9	2,908 7	46,108 12	737 10	3,47,711 3
	Total	150	1922-23	1,719 9	..	4,647 2	.. 2,020 2	5,515 12	1 4	45,728 9	1,639 2	57,231 4
			1923-24	Cr. 210 2	..	144 13	.. 272 3	17 6	..	495 2	..	175 0
			1924-25	.. 430 10	..	..	..	30 15	..	..	..	399 11
				8,57,582 1	..	35,602 11	Cr. 14,443 1	14,309 10	2,532 2	96,558 10	2,376 12	9,94,538 13
July 1921 50 Metre Gauge Wagons, E. B. Ry.	99 G	25 Wagons	1920-21	1,09,245 9	..	12,909 10	..	7 12	..	26 5	..	1,22,189 4
		25 "	1921-22	40,449 10	..	Cr. 872 6	983 15	10,632 12	476 14	14,114 13	261 0	66,046 10
	Total	50	1922-23	22 3	..	31,844 0	Cr. 321 2	4,216 9	..	8,837 9	207 12	44,806 15
			1923-24	..	..	..	.. 349 15	229 11	..	234 7	..	114 3
				1,49,717 6	..	43,881 4	312 14	15,086 12	476 14	23,213 2	468 12	2,33,157 0
Ditto	100 G	4 Wagons	1920-21	91,003 6	..	14,556 4	..	49 11	7 1	..	..	1,05,616 6
		46 "	1921-22	40,154 15	..	Cr. 1,519 3	832 14	1,589 14	485 1	12,013 1	185 4	53,741 14
	Total	50	1922-23	969 9	..	32,004 4	290 9	3,251 7	..	7,376 0	297 2	44,148 15
			1923-24	..	..	..	Cr. 563 4	608 3	..	50 12	..	105 11
				1,32,127 14	..	45,041 5	559 3	5,499 3	492 2	19,439 13	482 6	2,03,612 14
December 1525	0859 L/K	N. W. Ry., 351 L. R. C. A. Wagons A1 Type.	Up to March 1926.	7,141 10	88,252 15	908 12	1,062 8	14,437 10	1,292 13	161 5	37 2	1,13,294 11 No bills
Ditto	860 G	Secy., Railway Board, Delhi, 143 L. R. C. A. Wagons A2 Type.	Up to March 1926.	9,084 6	46,502 8	2,380 0	641 14	18,794 8	885 15	..	350 9	78,648 1 No bills

APPENDIX II.

Order No. 0167 L. G.

Raw Material for 85 Bogie Carriage Underframes 67'-0" for N. W. Railway.

Item.	Actual weight.				Actual cost.		
	Ton.	Cwt.	Qr.	Lb.	Rs.	A.	P.
Steel Sections "British".	107	1	2	14	19,264	9	6
Tata Iron and Steel Co.	1,192	18	3	2	2,05,201	10	6
M. S. Rivets "British"	22	15	3	0	6,360	4	6
Hex, Nuts	2	9	3	23	1,205	13	0
Vacuum brake axle boxes, bearing spring, etc., "British".					2,49,324	0	3
Steel castings supplied by Messrs. Hukum Chand Electric Works Co.	111	13	3	17	73,719	3	0
Screw Coupling, auxiliary, bearing springs supplied by Messrs, Burn & Co.	....				15,419	3	0
Supplied from stock	75	17	2	7	15,550	9	6
					5,86,045	5	3

Order No. 0195 G.

Material for 100 M. A-1 Type Metre Guage C. G. Wagons for M. and S. M. Railway.

Item.	Actual weight.				Actual cost.		
	Ton.	Cwt.	Qr.	Lb.	Rs.	A.	P.
Steel Sections.	131	17	1	17	29,537	4	0
Tata Iron and Steel Co.	73	2	2	25	20,383	13	0
Grade "A" Iron	58	11	0	18	16,952	7	0
M. S. Plates $\frac{5}{8}$"	5	18	3	0	1,250	13	0
M. S. Plates $\frac{3}{16}$"	51	7	2	2	36,131	12	0
,, $\frac{1}{16}$" to $\frac{1}{8}$"	64	12	1	13			
M. S. Rivets $\frac{3}{4}$" and $\frac{5}{8}$"	6	10	0	4	5,625	6	0
,, $\frac{1}{2}$" and $\frac{3}{8}$"	6	1	1	12			
Hex. Nuts					323	4	3
Buffers, axle boxes, bearing springs, vacuum breake, etc.					1,51,862	9	9
Supplied from Calcutta Stock					335	1	6
					2,62,402	6	6

Order No. 0946 G.

For 164 M. G. Wagons M. A-1 Type for M. and S. M. Railway.

Items.	Actual weight.				Actual cost.		
	Ton.	Cwt.	Qr.	Lb.	Rs.	A.	P.
Steel Sections "British". . .	255	11	1	7	1,18,703	0	3
Grade "A" Iron "British" . .	95	4	0	21	57,409	8	3
Sheets ⅛"-and up, "British" . .	169	11	0	17	1,64,346	9	0
„ below ⅛", "British" . .	105	1	1	7			
Rivets, "British"	23	0	0	27	14,591	7	9
Nuts, "British"	0	3	3	11	364	2	3
Bearing springs, vacuum brake, axle boxes, buffers, etc.					3,55,901	6	0
Supplied from stock . . .					777	13	9
					7,42,095	15	3

Order No. 0787 G.

Raw Material for 27 Bogie Carriage Underframes 60' for N. W. Railway.

Items.	Actual weight.				Actual cost.		
	Ton.	Cwt.	Qr.	Lb.	Rs.	A.	P.
Steel Sections, "British" . .	254	5	0	20	1,13,732	12	6
Grade "A" Iron, "British" . .	33	0	0	25	28,369	4	6
Yorkshire Iron, "British" . .	0	3	3	21	591	11	9
M. S. Sheets ¼" and up, "British" .	27	14	3	24	17,029	1	0
M. S. Rivets ⅝" and up, "British" .	13	1	0	12	7,419	9	9
„ ⅜" and ½", "British" .	0	1	3	23			
Hex. Nuts, "British" . . .	1	2	1	15	1,527	1	3
Buffers, axle boxes, bearing springs, vacuum brake, etc.					3,01,417	7	0
Supplied from Calcutta Stock . .					987	6	3
					4,62,674	6	0

Order No. 895 G.

For 15 sets Bogie Carriage Underframes 67'-0" long for E. B. Railway.

Items.	Actual weight.				Actual cost.		
	Ton.	Cwt.	Qr.	Lb.	Rs.	A.	P.
Steel Sections, "British"	149	10	2	9	68,173	14	0
Crown Iron, "British"	17	2	3	8	9,932	0	9
Plates ¼" and up, "British"	15	12	2	24	9,630	2	3
Yorkshire Iron "Britsh"	0	2	1	14	115	4	3
Rivets ½" and up "British"	7	10	3	2	4,248	7	6
" ⅜", "British"	0	0	1	23	17	11	3
Hex. Nuts, "British"	0	10	3	23	829	8	0
Buffers, "British"					10,808	5	9
Axle Boxes, "British"					19,417	11	6
Vacuum Brake, "British"					26,776	8	0
Bearing Springs, "British"					12,536	15	9
Parts of wagon, viz.:—							
C. S. Hanger Brackets, Forgings, Diagonal Bars, Cotter Pins, etc.					94,579	9	0
Supplied from Calcutta Stock					761	14	9
"							
					2,57,828	0	9

Order No. 97 G.

Raw Material for 150 A-3 Type Broad Gauge Wagons for E. B. Railway.

Items.	Actual weight.				Actual cost.		
	Ton.	Cwt.	Qr.	Lb.	Rs	A.	P.
Mild Steel, "British"	434	12	0	3	1,52,331	11	6
Tata Iron and Steel Co.	106	2	3	19	26,792	9	6
Grade "A" Iron, British	92	18	2	25	35,225	2	0
Yorkshire Iron, British	14	12	0	19	13,439	6	3
M. S. Sheets ¼" and up, British	63	11	3	16			
" 1/16", British	164	5	2	13	1,52,166	6	9
" ⅛" to 1/16", British	169	3	1	21			
Rivets 1 to ⅝", British	20	12	3	13			
" ⅝" and ¾", British	16	9	1	2	59,732	7	0
Hex. Nuts, British	1	1	3	2	1,042	12	0
Buffers, axle boxes, bearing springs and vacuum brake, etc.					4,20,370	8	3
Supplied from Calcutta Stock					1,063	15	0
					8,22,164	14	3

Order No. 99 G.

Raw Material for 50 M. A-3 M. G. Wagons for E. B. Railway.

Items.	Actual weight.				Actual cost.		
	Ton.	Cwt.	Qr.	Lb.	Rs.	A.	P.
Mild Steel, British	84	15	2	10	39,282	1	9
Tata Iron and Steel Co.	36	13	3	18	10,551	6	9
Grade "A" Iron, British	30	8	0	20	11,810	9	0
M. S. Sheets $\frac{1}{16}$" to $\frac{1}{8}$", British	38	10	1	6	27,690	5	0
" $\frac{3}{16}$", British	30	1	3	8			
Rivets $\frac{5}{8}$" to $\frac{1}{2}$", British	3	12	3	14	4,141	8	6
" $\frac{1}{2}$" and $\frac{5}{8}$", British	4	2	3	6			
Hex. Nuts, British	0	3	0	25	168	3	9
Axle boxes, bearing springs, vacuum brake, etc.					68,763	1	3
Supplied from Calcutta Stock					167	10	9
Buffers (from Messrs. Burn & Co.)					31,550	0	0
					1,84,124	14	9

Order No. 100 G.

Raw Material for 50 M. C-4 Type Metre Gauge Wagons 20' for E. B. Railway.

Items.	Actual weight.				Actual cost.		
	Ton.	Cwt.	Qr.	Lb.	Rs.	A.	P.
Mild Steel, British	73	11	0	25	25,653	1	9
Tata Iron and Steel Co.	27	3	2	24	7,532	12	6
Grade "A" Iron, British	29	1	3	21	11,321	6	6
M. S. Sheets $\frac{1}{8}$", British	11	13	1	21	15,457	15	6
" $\frac{3}{16}$", British	29	12	2	15			
M. S. Rivets $\frac{1}{2}$"$\times\frac{3}{8}$", British	2	10	1	8	3,239	10	3
" $\frac{3}{4}$"$\times\frac{3}{8}$", British	3	11	1	15			
Hex. Nuts, British	0	3	0	11	161	3	3
Axle boxes, vacuum brake, bearing springs, etc.					67,367	13	9
Supplied from Calcutta Stock					167	3	3
Buffers (from Messrs. Burn & Co.)					31,550	0	0
					1,62,451	2	9

Order No. 0945 G.

108 B. G. Covered Goods Wagons A-2 Type 24'-6" for O. and R. Railway.

Items.	Actual weight.				Actual cost.		
	Ton.	Cwt.	Qr.	Lb.	Rs.	A.	P.
Steel Sections, British	375	8	2	12	1,50,462	10	0
Grade "A" Iron, British	62	10	2	11	38,176	7	0
Yorkshire Iron, British	11	0	3	22	10,161	11	6
Sheets, M. S. $\frac{1}{16}$", British	105	0	1	1	1,56,056	4	9
,, $\frac{1}{4}$" and up, British	36	7	2	25			
,, $\frac{3}{8}$" and $\frac{1}{16}$", British	112	9	0	18			
M. S. Rivets 1" to $\frac{5}{8}$", British	14	0	0	10	14,946	10	6
,, $\frac{3}{4}$" and $\frac{1}{2}$", British	10	7	3	14			
Hex. Nuts, British	0	0	2	21	55	12	6
Buffers, axle boxes, bearing springs, vacuum brake, etc., British					3,68,556	12	6
Material supplied from Calcutta Stock					1,357	10	0
					7,39,773	14	9

APPENDIX III.

Statement of total Expenditure in Revenue Accounts for Garden Reach months to 192 .

	Garden Reach. Nov. '21 to Oct. '22.	Garden Reach. Nov. '22 to Oct. '23.	Garden Reach. Nov. '23 to Oct. '24.	Garden Reach. Nov. '24 to Oct. '25.	1919-20.	1920-21.	Totals.
Unfinished Work, etc.	876,106	37,950	cr. 55,355	113,753	..	194,964	1,167,418
Charges Recoverable	4,053	3,568	6,397	6,142	..	..	..
Departmental Issues recoverable.	63,576	34,796	12,444	85,739	..	..	..
Productive Materials.							
Direct Imports	848,666	136,723	17,097	245,640	..	..	..
Pig Iron	..	..	..	..	..	..	..
Other Materials	..	..	..	..	..	..	..
Fuel	..	..	..	..	..	..	..
Direct Purchase	..	..	202,069	6,248	..	..	..
Local Purchase	24,548	86,788	30,843	102,674	..	..	..
Issues from Stock	cr. 24,316	cr. 322	13,006	12,408	..	..	..
Productive Labour.							
Piece Work, Contract	166,787	152,561	94,093	113,398	..	..	..
Daily	4,201	6,384	6,383	4,838	..	..	..
Total cost of above	1,087,515	420,498	382,832	577,087	290,516	3,100,101	5,858,040

Statement of total Expenditure in Revenue Accounts for Garden Reach months to 192 .—contd.

——	Garden Reach Nov. '21 to Oct. '22.	Garden Reach Nov. '22 to Oct. '23.	Garden Reach Nov. '23 to Oct. '24.	Garden Reach Nov. '24 to Oct. '25.	1919-20.	1920-21.	Total.
Establishment.							
Salaries—Direct	99,975	42,869	33,837	30,297	..	..	..
,, —Indirect	..	60,297	41,882	41,667	..	..	..
Allowance, etc.	693	3,374	2,925	1,429	..	..	..
Other Charges.							
Repairs to Building, etc.	22,178	19,463	15,578	19,416	..	..	..
Tools	15,004	7,780	19,387	5,414	..	..	..
Designs and Experiments	158	22	13	..	..	..	..
Depreciation	9,484	8,096	6,782	6,816	..	..	..
Power and Light	63,672	57,965	21,219	46,026	..	..	..
Other Fuel	11,837	7,863	..	4,838	..	..	..
General Stroes Labour	cr. 637	53	252	179	..	..	..
Works Coolies, N. P.	..	16,749	18,345	16,767	..	..	..
Other Works Material and Stores.	cr. 533	1,525	2,607	1,069	..	..	..
Other N. P. Labour—Cranemen, Oilmen, etc.	30,745	6,600	5,147	7,146	..	..	..
Rent and Taxes	11,428	10,835	15,686	5,988	..	..	..
Catalogues and Advertisement.	3,888	3,434	2,413	1,552	..	..	..
Travelling Expenses	5,310	7,698	3,202	2,850	..	..	..
Correspondence	6,704	6,178	5,078	5,101	..	..	..
Miscellaneous	12,022	5,055	2,399	3,022	..	..	..
Total Establishment and Other Charges.	291,928	265,856	196,752	199,577	119,335	312,217	1,385,665
Total Expenditure	2,255,549	724,304	523,729	890,417	409,851	3,607,282	7,243,714
Average trade expenses	Rs. 13,85,665 on Rs. 58,58,049=23½ per cent.						

APPENDIX IV.

Replacement and book values of Land, Buildings and Plant for Wagon Works.

Particulars.	Replacement value.	Book value.
	Rs.	Rs.
Land	6,75,000	29,000
Buildings	1,09,620	1,649
Machinery	1,50,575	25,603
Working capital required	9,00,000	9,00,000
Proportion of Howrah Block and Buildings	1,95,000	56,000
Proportion of Kalimati Block and Buildings	1,90,000	42,000
TOTAL CAPITAL	21,60,195	10,54,252

NOTE:—The proportions taken of Howrah Works and Kalimati Works have been approximated.

Working Capital.—The figure of Rs. 9,00, 00 is also approximated It varies between Rs. 2,00,000 and Rs. 16,00,000.

When the requirement is small the difference would lie idle and when the requirement exceeds Rs. 9,00,000 the excess would have to be arranged for from our general account.

APPENDIX V.

Garden Reach Department.

	31st October, 1922.	31st October, 1923.	31st October, 1924.	31st October, 1925.
	Rs.	Rs.	Rs.	Rs.
Direct Establishment—				
Europeans	13,200	13,200	13,200	13,200
Statutory Indians	37,413	29,669	20,637	17,097
TOTAL	50,613	42,869	33,837	30,297
Indirect Establishment—				
Europeans	24,427	30,776	22,476	21,662
Statutory Indians	23,640	29,521	19,406	20,005
TOTAL	48,067	60,297	41,882	41,667
Total Establishment—				
Europeans	37,627	43,976	35,676	34,862
Statutory Indians	61,053	59,190	40,043	37,102
TOTAL	98,680	1,03,166	75,719	71,964

(7) *Letter from Messrs. Jessop and Company, Limited, dated 10th August 1926.*

Referring to the oral evidence we gave on the 23rd July 1926, we now deal with the salient points that arose out of the questions that were put to us.

(1) The list "A" referred to in the middle of page 258 of the applications received by you in connection with the statutory enquiry regarding the grant or continuance of protection to the steel industry in India after the 31st March 1927 is given on page 18 of our letter to you, dated the 11th/14th May 1926, and is entered on page 259 of the book referred to above.

Cost of Tata material Rs. 2,130 is obtained from the figures Rs. 1,045 down to Rs. 200 given on page 259. Imported material Rs. 5,006 is made up of the figures Rs. 4,551 and the duty Rs. 455 on the same page.

(2) A list of wagon orders secured by us since 1st November 1924 is enclosed showing the bounties payable on them, where the figure is known.

The method of calculating the bounty payable on any particular type of wagon is shrouded in mystery and is known only to the Railway Board and does not lend itself to being checked even after the figure of bounty is known.

As an example of the mystery we complain of we cite two examples.

Our last order for A-1 wagons was secured at Rs. 3,485 each including a bounty of Rs. 402 which would indicate that the imported price c.f.i. Indian Port, *plus* duty, landing and erection, was Rs. 3,485−Rs. 402=Rs. 3,083.

The figures for landing and erection may be taken at Rs. 356 and for duty at 10 per cent. Rs. 248 making the c.f.i. price Rs. 2,479. At the same time the Indian Standard Wagon Co. secured an order for C-3 wagons at Rs. 3,250 including a bounty of Rs. 335 each. If erection and landing Rs. 331 each and duty Rs. 235 are deducted from these figures they make the c.f.i. cost of this wagon=Rs. 2,349.

Orders for A-1 and C-3 wagons were also placed at the same time with the Metropolitan Carriage Wagon and Finance Co., Ld., at £176 and £180 each f.o.b. English Port, *vide* page 200 of the Indian Trade Journal of February 4th, 1926.

Freight and charges on these two types of wagons would be practically in proportion to their f.o.b. costs so that according to the Railway Board the case resolves itself into the following anomaly:—

An A-1 wagon £176 f.o.b.=Rs. 2,479 c.f.i. Indian Port,

A C-3 wagon £180 f.o.b.=Rs. 2,349 c.f.i. Indian Port,

showing the lower sterling equivalent in rupees to be greater than the rupee equivalent of the higher sterling figure.

Such discrepancies leave us guessing at the rupee cost of imported wagon as calculated by the Railway Board. Of course, it may be that although the C-3 wagons were placed at £180 each, the figure of lowest tender for these wagons, *viz.*, £168-5-0, was used for purposes of ascertaining the bounty figure, *viz.*, Rs. 335. If this were done, the railway concerned would benefit at the expense of the general tax-payer.

It would appear, therefore, that until the question of protection for rolled steel sections and the duty on component parts of wagons and underframes are settled and till the exact costs of inging the various types of wagons out and putting them on

rails ready for traffic are disclosed it is not possible to gauge accurately the amount of protection the Indian wagon builder will require to enable him to secure orders.

The capacity of wagon builders at present is about 5,000 standard wagons and 350 underframes per annum.

If Government were to earmark 4,500 wagons and 250 underframes annually for tender among Indian builders sufficient local competition would be secured to prevent profiteering as the work offering would be short of India's capacity and wagon builders would have to cut in among themselves to secure orders.

If there were a continuity of this policy, and if wagon building in India proved to be successful, local builders would as a commercial proposition come out to bid for more wagons and underframes than were earmarked for India and gradually compete in the open market, without preference, for the further requirements of the Government and eventually it would be found that all the wagons offering would be absorbed by local builders in fair competition with imported wagons, provided the raw material was not unequally taxed.

(3) Details of cost of labour and material for an A-2 wagon enclosed.

(4) Examples of recent imported prices of three selected forgings for I. R. C. A. Standard Wagons:—

		F. O. B. price in sterling.	Rupee landed cost without duty.
		£ s. d.	Rs.
British Screw Coupling .	Each	1 8 3	20
Continental Draw Bar Hook .	Each	0 15 0	11
British Brake Beams .	Each	1 4 9	18

(5) Total bills for wagons and underframes for period of accounting enclosed.

(6) Exact cost of N. W. Railway Bogies enclosed.

(7) Statement of output up to 31st October 1925 enclosed.

(8) Revenue statements for Garden Reach Works for the years ending October 1924 and 1925 enclosed.

(9) Output classified according to description of work enclosed.

(10) List of orders for fabricated steel registered from 1st March 1924 to date enclosed.

(11) Figures relating to Imported Bridge Span enclosed.

(12) Emergency Orders. On investigating this matter further it is found that they are of small value and do not bear any appreciable ratio to our output.

It will be seen from the prices obtained for the various classes of structural work shown on the lists referred to above under Item (10) that the term fabricated steel covers a large range of work, so that it is impossible to apply the rates of British and local costs of conversion that we quoted in our evidence, to any specific class of work. The rates £6 and £5 per ton assumed by us in our comparisons of costs of conversion of structural steel with the equivalents of Rs. 117 and Rs. 110 per ton, the local costs of work of a similar nature, are averages only.

In view of the searching examinations made by the Tariff Board of our costs of fabricated steel and of building wagons and underframes as compared with British costs, the measure of support suggested by us in our application for protection was based on current conditions and was kept if anything below the present minimum required to be effective. If it is desired to carry out the instructions of the Legislative Assembly to establish the Steel Industry

of India expeditiously and cheaply, the margins we suggested would have to be materially increased, not to provide large profits for local manufacturers but as an insurance against the deliberate importing of structural steel work, wagons and underframes against the wishes of the country and the ruling of the Legislative Assembly.

The support given to local wagon building has enabled the industry to make rapid strides, the quality of the work being equal to anything imported and prices have been largely reduced by local competition, but it must not be forgotten that profits in any industry are essential as they attract capital and stimulate enterprise by creating healthy competition.

The duty on wagons and fabricated steel should, therefore, be such that would-be importers will have to pay materially more if they import than if they purchased locally.

Alternatively, wagons and underframes may be earmarked for India as suggested above and fabricated steel protected by such duty as the Board will have decided on in view of the company lines (largely owned by Government) who refuse to call for tenders locally but go abroad for their structural requirements without giving India a chance of keeping in India as much of the money earned by these railways as possible.

Since the enquiry held by the Tariff Board last year a committee, under the chairmanship of Sir Vincent Raven, was appointed by Government to enquire into and report on the working of State Railways workshops in India.

The terms of reference to this committee kept strictly within the spirit of the Railway Board letter No. 1597-S. of the 11th August 1923, which stated:—

"It is the policy of Government to restrict railway workshops to their primary function of dealing with the repairs and maintenance of the stock and equipment of the railway as far as this can be done with observance of economy in the working of the shops. To some extent it is desirable to undertake work that is not purely repair or maintenance work in order to make the best use of machines and staff that could not otherwise be given continuous full time employment. But it is the policy of Government to keep the amount of such work to a minimum and particularly when it can be done by private firms."

The report of this committee has now been published and we are greatly concerned to find in it a recommendation that all lower class bogie carriage underframes should be built in one of the railway workshops.

No attempt has been made to ascertain what the underframes would cost and if the finding were given effect to it would be a reversion of Government policy that would go far to cripple private enterprise.

Enclosure No. 1.

Orders received for wagons and underframes from 1st November 1924 to 24th July 1926.

Date.	Order No.	Particulars.	Rate.	Amount.
			Rs. Each.	Rs.
1925.				
8th Dec. . .	0859 L.-K.	351—"A.-1" type I. R. C. A. wagon for N.-W. Railway.	3,316	11,63,916
		Including a bounty of — .	402	
Do. . .	860-G.	143—"A.-2" type I. R. C. A. wagons for E. I. Railway	3,481	4,97,783
		Including a bounty of — .	379	
1926.				
23rd June .	022 S.-G.	93 Coaching underframes 66 ft. long for G. I. P. Railway.	9,591 Average each underframe.	8,91,945
		Bounty not known.		

Enclosure No. 2.

ORDER No. 0379-K.

300—" A-2 " Type 5' 6" Gauge Covered Goods for E. I. Railway.

Description.	Actual Cost.
	Rs.
British material	3,50,360
Continental material	44,342
Indian material	3,45,544
TOTAL	7,40,246
Labour	1,35,749

Enclosure No. 3.

Bills for wagons built from 1st November 1919 to 9th August 1924.

Order No. and date.	Particulars.	Rate. "Average."	Amount.
		Rs. Each.	Rs. a. p.
97-G., 5th Jan. 1921	150 B. G. Covered Goods wagons, " A-3 " Type, for E. B. Railway.	8,496	12,74,414 14 3
99-G., 5th Jan. 1921	50 M. G. Wagons, " MA-3 " Type for E. B. Railway.	5,960	2,97,974 14 9
100-G., 5th Jan. 1921	50 M. G. Wagons, " MC-4 " Type, for E. B. Railway.	5,242	2,62,111 2 9
895-G., 10th July 1920.	15 sets Bogie Carriage underframes, 67' long, for E. B. Railway.	25,314	3,79,703 0 9
0787-G., 17th April 1920.	27 Bogie Carriage underframes 60' long, for N.-W. Railway.	24,016	6,48,434 6 0
0195-G., 4th Mar. 1921	100 M. G. Wagons " MA-1 " Type, for M. and S. M. Railway.	4,779	4,77,902 6 6
0946-G., 16th Aug. 1920.	164 M. G. Wagons " MA-1 " Type, for M. and S. M. Railway.	6,644	10,89,609 15 3
0945-G., 16th Aug. 1920.	108 B. G. Covered Goods Wagons, " A-2 " Type, for O. and R. Railway.	9,843	10,63,005 1 9
0921 M.-G., 14th June 1922.	30 B. G. Covered Goods Wagons, " A-2 " Type, for M. P. and T. Railway	7,611	2,28,321 9 3
0167 L.-G., 29th Mar. 1924.	85 Bogie Carriage underframes, 67' long, for N.-W. Railway.	11,400	9,69,000 0 0
0379-K., 9th Aug. 1924.	300 Covered Goods Wagons, " A-2 " Type, for E. I. Railway.	4,182	12,54,450 0 0

Enclosure No. 4.

ORDER No. 0167-L./G.

Cost of 85 bogie carriage underframes 67′ 0″ Long, North Western Railway.

Item.	Actual Weight.	Actual Cost,
	Tons c. qr. lb.	Rs. A. P.
Steel Sections, " British "	107 1 2 14	19,265 0 0
Tata Iron and Steel Co., " Indian " . .	1,192 18 3 2	2,05,202 0 0
M. S. Rivets, " British "	22 15 3 0	6,360 0 0
Hex. Nuts, " British "	2 9 3 23	1,206 0 0
Vacuum Brake, Axle Boxes, Bearing Springs, etc., " British."	..	2,54,016 0 0
Steel Castings supplied by Hukum Chand Electric Works	111 13 3 17	74,164 0 0
Screw Couplings, Bearing Springs, supplied by Messrs. Burn & Co.	..	16,268 0 0
Material supplied by Angus Engineering Co.	..	7,177 0 0
Supplied from Stock	75 17 2 7	15,550 0 0
Supplied from Bazar	..	21,615 0 0
TOTAL .	..	6,20,823 0 0

ABSTRACT OF COST.

	Rs.
British Material	2,80,847
Indian Material	3,39,976
Issues by Howrah Foundry	93,536
Labour	91,623
TOTAL .	8,06,982

Enclosure No. 5.

Output in Rupees analysed according to classes of work.

During year.	Tea Houses, Withering Lofts and Tea Racks.	Pit head Frames, Coal Skips and Tubs.	Fencing and Gates.	Oil and Water Tanks and Stagings.	Boilers and Vats.	Dog-spikes, Bolts, Nuts and Rivets.	Jetties, Pontoons, and Buoys.	Trough and Buckle Plates.	Carts and Road Rollers.	Cranes and Elevators.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1921-22	*Nil*	73,274	33,786	1,28,280	*Nil*	7,910	26,857	15,000	*Nil*	3,98,200
1922-23	1,62,237	*Nil*	16,207	1,08,626	*Nil*	20,960	1,67,350	14,710	2,460	26,458
1923-24.	91,977	28,068	12,111	91,084	*Nil*	28,257	6,295	2,300	7,505	24,338
1924-25	92,482	2,515	30,917	45,820	*Nil*	2,000	1,25,198	*Nil*	*Nil*	23,965

Enclosure No. 6.

Garden Reach Department—Revenue Account for the years ending 31st October.

Dr. Cr.

	1924.			1925.				1924.			1925.		
	Rs.	A.	P.	Rs.	A.	P.		Rs.	A.	P.	Rs.	A.	P.
Stock	4,016	3	9	6,845	3	9	Sales	4,09,237	7	9	8,27,121	9	9
Tools	10,228	5	9	8,044	12	0	Deductions from Contractors Work	1,541	13	3	1,776	9	9
Unfinished Work	69,600	0	0	98,863	0	0	Surplus material returned to stock.	5,597	0	0	228	7	0
Charges Recoverable—							Exchange of Invoices	39	0	0	249	0	0
Freight	3,394	8	6	1,766	6	0	6 per cent. interest on Sale Price of G. R. land.	..			48,900	0	0
Despatching	2,194	5	6	4,342	10	6	Block Item sold	171	0	0	..		
Miscellaneous	180	6	0	..			Adjustment of previous year's accounts.	758	14	0	280	6	0
Workmen's Fares	306	7	0	1	0	0	Additions to Buildings, etc.	4,320	0	0	83	10	0
Packing Timber	320	6	0	..			Work done	10,211	12	9	1,33,545	11	5
Packing Case	0	4	0	31	15	0	Stock	6,845	3	9	5,122	0	0
Khorakee	0	8	0	..			Tools	8,044	12	0	6,519	14	6
Howrah Mechanical Work Production.	12,402	4	10	85,543	15	6	Unfinished work	98,863	0	0	..		
Howrah Structural Work Production	41	8	5	195	8	5							
Direct Purchases Production	2,02,068	10	6	11,085	10	0							
Direct Imports Production	17,096	13	6	2 45,640	3	6							
Bazar Purchases Production	30,843	4	9	1 02,673	9	9							
Issues from Stock Production	13,005	10	0	12,660	0	0							
Difference in stock	486	0	0	252	0	0							
Direct Purchases Non-Production	19,991	4	0	43,229	12	3							
Direct Imports Non-Production	207	14	0	..									
Bazar Purchases Non-Production	10,777	4	9	7,634	1	9							
Issues from Stock Non-Production	6,562	7	0	3,753	15	0							
Difference in stock	227	0	0	149	0	0							
Works Issues Non-Production	11,250	5	6	4,721	3	9							
Production Labour	1,00,476	8	9	1,18,235	8	6							
Non-Production Labour	66,022	10	6	64,035	1	6							
Direct Charges	24,680	2	0	61,182	7	1							
Depreciation	6,855	0	3	5,957	15	6							
Materials general charges	1,670	0	0	1,616	0	0							
General Works Charges	34,152	0	0	33,928	0	0							
General Charges	14,298	0	0	17,735	0	0							
Allowance for Penalties, Complaints and Maintenance.	..			52,364	0	0							
Profit	21,473	12	3	31,082	8	8							
TOTAL	5,45,629	15	6	10,22,768	8	5		5,45,629	15	6	10,22,768	8	5

Enclosure No. 7.

Tonnage Output.

Where produced.	1922-23.	1923-24.	1924-25.	Present average capacity.
	Tons.	Tons.	Tons	
Wagon Works . . .	1,896	204	2,514	6,000
Structural Works—				
Howrah	6,848	6,360	5,490	9,000
Jamshedpur . . .	1,845	1,835	2,376	7,000
Mechanical Works, Howrah .	1,120	730	820	2,000
TOTAL .	11,709	9,129	11,200	24,000

Enclosure No. 8.

Order received for fabricated steel from 1st March 1924 to July 1926.

Order No.	Date.	Constituents.	Particulars.	Average Rate.
				Per cwt.
				Rs. A.
091 L-H.	6th Mar. 1924 .	Bridge Engineer, N.-W. Railway, Jhelum.	Supply of Iron and Steel work for Foot Over-Bridge.	13 0
0107 B-H.	5th Mar. 1924 .	Burma Corporation, Namtu, Burma.	Supply of Iron and Steel work for Storage and Crushing Plant.	15 0
0112 B-H.	11th Mar. 1924	Ditto . . .	Supply of Iron and Steel work for Storage and Crushing Plant.	12 0
114 H.	4th Mar. 1924 .	Williamson Magor & Co., A./C. Romai, Calcutta.	Supply of Iron and Steel work for Bungalow.	15 0
0117 L-H.	6th Mar. 1924 .	Jullundur Electric Supply Co., Ltd., Punjab.	Supply of M. S. Tanks .	16 0
118 H.	Ditto .	Duncan Bros. & Co., A./C. Anglo-India Jute Mills Co., Ltd., Calcutta.	Supply of Iron and Steel work for Building.	11 8
123 H.	10th Mar. 1924	Kilburn & Co., A./C. Tata Iron and Steel Co., Ltd., Calcutta.	Supply of Iron and Steel work for Steel Stairs.	15 0
128 H.	Ditto .	Nurshing Dass Lakutia, Calcutta.	Supply of R. S. Columns	12 0
139 H.	15th Mar. 1924	Lyall Marshall & Co., M./A. Indian Home Mission to the Santhals Tea Gardens, Calcutta.	Supply of Iron and Steel work for Godown.	13 0
140 H.	Ditto .	Chief Engineer, B.-N. Railway, Kidderpore.	Supply and Fabrication 4-40' Girders.	15 0
0141 J-H.	Ditto .	Officer in Charge, Regimental Workshop, Roorkee, U. P.	Supply of Iron and Steel work for shed.	15 0
0146 H.	18th Mar. 1924	District Engineer, A.-B. Railway, Chittagong.	Supply of Roof Trusses and Purlins.	15 0
137 H.	15th Mar. 1924	Nursing Dass Lakutai, Calcutta	Supply of R. S. Double Columns.	12 0
0143 B-H.	20th Mar. 1924	Burma Corporation, Ltd., Burma	Supply of Iron and Steel work for Storage and Crushing Plant.	14 0
154 H.	26th Mar. 1924	Chief Engineer, Port Commissioners, Calcutta.	Supply of Iron and Steel work for Lift Bridges, Hastings and Chitpore.	14 0
160 H.	31st Mar. 1924	Controller of Stores, E. I. Railway, Calcutta.	Supply of Iron and Steel work for Foot Over-bridge.	13 0
0161 L-H.	Ditto .	Staff Officer, Northern Command, Murree.	Supply of Iron and Steel work for Pontoon Bridge.	13 0
0166 J-H.	3rd April 1924	District Engineer, P. W. D., Aligarh.	Supply of Iron and Steel work for Postal Workshop, Aligarh.	15 0
172 H.	4th April 1924	Chief Engineer, B.-N. Railway, Kidderpore.	Supply of Iron and Steel work for 3 spans of 40' girders.	15 0
176 H.	9th April 1924	Shaw Wallace & Co., A./C. Burma Dooars Tea Co., Ltd., Calcutta.	Supply of Iron and Steel work for Tank and Staging.	17 0

Order No.	Date.	Constituents.	Particulars.	Average Rate.
				Per cwt. Rs. A.
019 H.	16th April 1924	Executive Engineer, Hazaribagh Division, Hazaribagh.	Supply of Iron and Steel work for Bridge over Barakar River.	13 0
202 H.	21st April 1924	J. C. Bannerjee, Calcutta .	Supply of R. S. Columns	12 0
211 H.	24th April 1924	A. and J. Main & Co., Ltd., Calcutta.	Supply of Iron and Steel work for Glazing work for Engine House.	13 0
214 H.	30th April 1924	Makhanlal Katri, Calcutta .	Supply of Iron and Steel work for Building.	13 0
0222 B-H.	1st May 1924 .	Burma Corporation, Ltd., Burma.	Supply of Crawl Beams	13 0
224 H.	2nd May 1924 .	Brooke Bond (India), Ltd., Calcutta.	Supply of Iron and Steel work for Platform Cover.	13 0
226 H.	Ditto .	Birla Bros., Ltd., Calcutta .	Supply of Trusses for Godown.	16 0
0230 L-H.	3rd May 1924 .	Jullundur Electric Supply Co., Ltd., Jullundur City.	Supply of Cross Arms .	20 0
231 H.	6th May 1924 .	Henry Williams (India), Ltd., Calcutta.	Supply of R. S. Columns and Roof Trusses.	14 0
232 H.	3rd May 1924 .	Sir Sarupchand Hukum Chand & Co., Calcutta.	Supply of Superimposed and Cantilever Superimposed Beams.	10 0
0236 H.	6th May 1924 .	D. P. Ogale & Co., M./A., Nagpur Glass Works, Ltd., Nagpur, C. P.	Supply of Iron and Steel work for Chimney and Open Shed.	20 0
0237 M-H.	Ditto .	Assistant Engineer, West Coast Harbour, Sub-Division Calicut.	Supply of R. S. Channels	13 0
239 H.	10th May 1924	Controller of Stores, E. I. Railway, Calcutta.	Supply of Iron and Steel work for Road Over-Bridge.	15 0
0243 J-H.	15th May 1924	Resident Engineer, R. and K. Railway, Izatnagar.	Supply of Iron and Steel work, Boiler Machine Shop.	14 0
0254 L-H.	21st May 1924	Controller of Stores, N.-W. Railway, Moghalpura.	Supply of 400 Angle Iron roof girders.	18 0
263 H.	26th May 1924	Controller of Stores, E. I. Railway, Calcutta.	Supply of Iron and Steel work for Road Over-Bridge.	16 0
0265 H.	Ditto .	District Engineer, Midnapur .	Supply of Iron and Steel work for Nimtola Bridge.	17 0
0268 J-H.	29th May 1924	Executive Engineer, C. Sarda Division, Irrigation Department.	Supply of 8 Unit Sheds .	14 0
271 H.	Ditto .	Jardine Skinner & Co., A./C. Ruttonpore Tea State, Calcutta.	Supply of Iron and Steel work for Roof of Engine House.	15 0
0282 H.	5th June 1924 .	Vice-Chairman, Town Committee, Haldibari.	Supply of Iron and Steel work for Bazar Shed.	15 0
0285 S-H.	6th June 1924 .	State Engineer, Rewa State, Rewa.	Supply of M. S. Trusses for New Central Record Room of Rewa.	16 0
134 H.	8th June 1924 .	Heeralall Agarwalla, Calcutta	Supply of R. S. Columns	12 8
272 H.	17th June 1924	Sriram Kundanmal, Calcutta .	Supply of Iron and Steel work for Building.	12 8

Order No.	Date.	Constituents.	Particulars.	Average Rate.
				Per cwt.
				Rs. A.
0286 H.	7th June 1924 .	District Engineer, Midnapore .	Supply of material for Culverts.	15 0
0288 M-H.	18th June 1924	Chief Engineer, S. I. Railway, Trichinopoly.	Supply of material for Weigh Bridge Girder.	15 8
292 H.	Ditto .	Karr & Co., Calcutta . .	Supply of Iron and Steel work for Building.	12 0
298 H.	21st June 1924	James Finlay & Co., A./C. Chargola, Calcutta.	Supply of Roof Trusses, etc., for Factory Extension.	17 0
311 H.	27th June 1924	Williamson Magor & Co., A./C. Boroi Tea Estate, Calcutta.	Supply of Iron and Steel work for Leaf House.	14 0
313 H.	Ditto .	Controller of Stores, E. I. Railway, Calcutta.	Supply of two sets 10' Span Girders.	13 0
314 H.	Ditto .	James Finlay & Co., Ltd., A./C. Lattakoojan Tea Estate, Calcutta.	Supply of R. S. Beam Columns.	13 0
0256 L-H.	30th June 1924	Executive Sanitary Engineer, Rawalpindi.	Supply of one Crude Oil Tank and Staging, etc.	15 0
300 H.	21st June 1924	Williamson Magor & Co., A./C. Romai Tea Estate, Calcutta.	Supply of Crude Oil Storage Tank.	23 0
0322 H.	8th July 1924 .	District Engineer, Midnapur .	Supply of Iron and Steel work for Amrakuchi Bridge.	13 0
0323 M-H.	Ditto .	Executive Engineer, Coimbatore, P. W. D.	Supply of Iron and Steel work for 200' Span Girder Bridge.	16 0
0327 B-H.	10th July 1924	Scortee Bara Bazar & Co., Rangoon.	Supply of Iron and Steel work for Cloth Market.	14 0
335 H.	15th July 1924	Basantalall Shiblall Saha, Calcutta.	Supply of Iron and Steel work for Building.	13 0
341 J-H.	18th July 1924	Chief Engineer, O. & R. Railway, Lucknow.	Supply of Iron and Steel work for Remodelling Foot Bridge Extension.	15 0
340 H.	16th July 1924	A. K. Aditya, Calcutta . . .	Supply of Iron and Steel work for Calcutta Blind School Building.	12 0
0352 B-H.	19th July 1924	Burma Corporation, Namtu .	Supply of Chutes for Storage and Crushing Plant.	19 8
H.	23rd July 1924	J. C. Banerjee, Calcutta .	Supply of Iron and Steel work for Building.	12 0
0359 H.	25th July 1924	State Engineer, Sikkim, Gangtok.	Supply of Iron and Steel work for Road Bridge.	14 0
360 H.	Ditto .	A. J. Main & Co., Calcutta .	Supply of Steel trough flooring.	18 0
0365 M-H.	28th July 1924	District Board Engineer, Salem	Supply of Iron and Steel work for renewal of Decking for Sanath Kumarandhi Bridge.	15 0
0366 S-H.	Ditto .	Divisional Engineer, G. B., H. E. H. The Nizam's, P. W. D., Warangal, Secunderabad.	Supply of Iron and Steel work for Road Bridge.	16 0
0367 H.	30th July 1924	Executive Engineer, Darjeeling Division.	Supply of Iron and Steel work for 14 spans of 40' Girders.	15 0

Order No.	Date.	Constituents.	Particulars.	Average Rate.
				Per cwt.
				Rs. A.
368 H.	30th July 1924	Williamson Magor & Co., A./C. Tukvar, Calcutta.	Supply of 2 Horizontal Cylindrical Oil Storage Tanks.	28 0
0369 J-H.	Ditto .	Resident Engineer, R. and K. Railway, Izatnagar.	Supply of Iron and Steel and Corrugated work for Island platform.	14 0
376 H.	Ditto .	Macneill & Co., A./C. Bhubhandhar Tea Estate, Calcutta.	Supply of Iron and Steel work for Godown.	14 0
0358 B-H.	25th July 1924	Chief Engineer, Burma Railway, Rangoon.	Supply of Iron and Steel work for 40 Spans of 20' Girders.	12 0
308 H.	17th July 1924	Executive Engineer, Port Commissioners, Calcutta.	Supply of Fish Plates .	13 0
258 H.	Ditto .	Chief Engineer, B.-N. Railway, Kidderpore.	Supply of materials for repairing girders.	14 0
383 H.	31st July 1924	Peninsular Tobacco Co., Ltd., Calcutta.	Supply of Iron and Steel work for Monghyr 1st floor extension.	13 0
388 H.	4th Aug. 1924 .	Kilburn & Co., A./C. Assam Co., Ltd., Calcutta.	Supply of M. S. Chimney and R. S. Columns.	20 0
0389 M-H.	5th Aug. 1924 .	Mysore Iron Works, Bhadravati.	Supply of Bottom Plates	21 0
381 H.	31st July 1924	American Manufacturing Co., Calcutta.	Supply of Overhead Beams.	11 0
0413 L-H.	20th Aug. 1924	State Engineer, P. W. D., Patiala.	Supply of Iron and Steel work for Building.	14 0
0417 J-H.	Ditto .	District Engineer, P. W. D., Allahabad.	Supply of Steelwork for Carpenter School.	15 0
0419 H.	23rd Aug. 1924	Burmah Oil Co., Ltd., Chittagong.	Supply of Iron and Steel work for Godown.	16 0
423 H.	29th Aug. 1924	Controller of Stores, E. I. Railway, Calcutta.	Supply of Iron and Steel work for Godonullah Bridge.	14 0
0428 J-H.	30th Aug. 1924	Chief Engineer, B. & N.-W. Railway, Gorakhpur.	Supply of Iron and Steel work for Carriage Shed.	14 0
430 H.	Ditto .	Gammon and Sanderson, Ltd., A./C. Messrs. William Jacks, Calcutta.	Supply of W. I. Drums .	30 0
0435 B-H. .	5th Sept. 1924	Messrs. Martin & Co., Rangoon.	Supply of Iron and Steel work for Ice Factory.	14 0
0436 H.	Ditto .	State Engineer, Kalahandi State, Bhawani-Patna.	Supply of Iron and Steel work for Screw Pile Bridge.	14 0
437 H.	Ditto .	Chief Engineer, Port Commissioners, Calcutta.	Supply of Iron and Steel work for Diversion Hastings and Chitpore Lift Bridges.	14 0
440 H.	9th Sept. 1924	Executive Engineer, Port Commissioners, Kidderpore.	Supply of Fish Plates	13 0
442 H.	11th Sept. 1924	Boving & Co., Ltd., Calcutta .	Supply of M. S. Flanged Pipes.	33 0
443 H.	17th Sept. 1924	Chief Engineer, Port Commissioners, Calcutta.	Supply of Iron and Steel work for Champatala Bathing Ghat.	15 0

Order No.	Date.	Constituents.	Particulars.	Average Rate.
				Per cwt.
				Rs. A.
0448 J-H.	18th Sept. 1924	Chief Engineer, O. & R. Railway, Lucknow.	Supply of 30' Special Trough Span.	16 0
453 H.	22nd Sept. 1924	A. M. Arathoon, Esq., Calcutta.	Supply of 14 roof Trusses	15 0
455 H.	Ditto .	McLeod & Co., A./C. Dooloogram Tea Co., Ltd., Calcutta.	Supply of materials for Leaf House.	18 0
459 H.	25th Sept. 1924	Williamson Magor & Co., A./C. Gohpur, Calcutta.	Supply of Iron and Steel work for 50' Extension to Leaf House.	15 0
0467 H.	2nd Oct. 1924	Executive Engineer, Upper Mahanadi Division, Raipur, C. P.	Supply of Iron and Steel work for Road Bridge.	16 0
470 H.	Ditto .	James Finlay & Co., Ltd., A./C. Borhat Tea Co., Calcutta.	Supply of Iron and Steel work for Tea House Extension.	15 0
473 H.	4th Oct. 1924 .	Macneill & Co., Ltd., A./C. Kalline Tea Estate, Calcutta.	Supply of Iron and Steel work for Godown.	13 0
474 H.	13th Oct. 1924	Controller of Stores, E. I. Railway, Calcutta.	Supply of Iron and Steel work for Grand Chord Doubling.	14 0
0450 B-H.	16th Oct. 1924	Superintendent of Stores, P. W. D., Burmah.	Supply of R. S. Beams and Bracings.	13 0
481 H.	18th Oct. 1924	Controller of Stores, E. I. Railway, Calcutta.	Supply of Iron and Steel work for Grand Chord Doubling.	14 0
0498 J-H.	6th Nov. 1924 .	Principal, St. George's College, Mussoorie, U. P.	Supply of Iron and Steel work for Roofing of Building.	16 0
0509 B-H.	10th Nov. 1924	Burma Corporation, Rangoon .	Supply of Iron and Steel work for Coke Screening and Storage Plant.	14 0
0510 B-H.	Ditto .	Ditto . .	Supply of Iron and Steel work for refinery Steelwork.	14 0
0519 B-H.	19th Nov. 1924	Ditto . . .	Supply of Iron and Steel work for Coke Screening and Storage Plant.	15 0
525 H.	24th Nov. 1924	Williamson Magor & Co., A./C. Borangajuli, Calcutta.	Supply of Iron and Steel work for Leaf House Extension.	15 0
0527 H.	2nd Dec. 1924 .	Executive Engineer, P. W. D., Oakdene, Darjeeling.	Supply of M. S. Plates and angle iron cleats.	15 0
540 H.	13th Dec. 1924	Chief Engineer, B.-N. Railway, Kidderpore.	Supply of one 20'-2" span Girder.	20 0
534 H.	Ditto .	Begg Dunlop & Co., Ltd., A./C. Jorehaut Tea Co., Ltd., Calcutta.	Supply of Horizontal Bracings, etc.	14 0
0543 H.	Ditto .	Nagpur Automobile and General Engineering Co., Ltd., Nagpur, C. P.	Supply of Iron and Steel work for Bungalows.	16 0
0544 B-H.	Ditto .	Burma Corporation, Rangoon .	Supply of Iron and Steel work for Foot Over-Bridge.	14 0
545 H.	16th Dec. 1924	Macneill & Co., A./C. Hatticherra Tea Estate, Calcutta.	Supply of Joists, Plates, etc.	15 0
546 H.	Ditto .	Controller of Stores, E. I. Railway, Calcutta.	Supply of 8 spans of 12' for Extension of Bridge at Sahebgunge.	16 8

Order No.	Date.	Constituents.	Particulars.	Average Rate.
				Per cwt.
				Rs. A.
548 H.	18th Dec. 1924	Williamson Magor & Co., A./C. Pertabghur, Calcutta.	Supply of Iron and Steel work for Bungalow.	14 0
0549 H.	Ditto .	Superintendent, Bazaloni Tea Co., Assam.	Supply of Frames .	30 0
0550 J-H.	Ditto .	Chief Engineer, O. & R. Railway, Lucknow.	Supply of Iron and Steel work for Rikhikesh Branch Construction.	17 0
0551 J-H.	Ditto .	Ditto . . .	Supply of 40′ Stand Plate Girders.	15 0
552 H.	Ditto .	Begg Dunlop & Co., A./C. Ranicherra Tea Co., Calcutta.	Supply of Iron and Steel work for Engine House Roof.	16 0
0557 L-H.	19th Dec. 1924	Chief Controller of Stores, I. S. D., Delhi.	Supply of 6 Steel Girders	16 0
0559 H.	20th Dec. 1924	District Engineer, Singhbhum	Supply of Iron and Steel work for Baljuri Nulla Bridge.	14 0
560 H.	Ditto .	Macneill & Co., A./C. Burtoll Tea Estate, Calcutta.	Supply of Withering Racks and Straining wire.	18 0
562 H.	Ditto .	Chief Engineer, E. B. Railway, Calcutta.	Supply of R. S. Beams, Angles and Plates, etc.	14 0
0564 H.	23rd Dec. 1924	Assam Oil Co., Ltd., A./C. Digboi, Assam.	Supply of Iron and Steel work for Roofs.	21 0
521 H.	20th Nov. 1924	Chief Engineer, B.-N. Railway, Kidderpore.	Supply of Iron and Steel work for Jetties.	16 0
583 H.	9th Jan. 1925 .	James Finlay & Co., Ltd., A./C. Panmimade Tea Estate, Calcutta.	Supply and Fabrication of Steel Girder Bridge 62′ span.	16 0
584 H.	Ditto .	Williamson Magor & Co., A./C. Kacharigaon, Calcutta.	Supply of Iron and Steel work for Leaf House, 44′ span.	15 0
0547 B-H.	16th Dec. 1924	Burma Corporation, Ltd., Rangoon.	Supply of Trusses, Columns, Purlins, etc., for Coarse Storage Bin.	14 0
0588 L-H.	12th Jan. 1925	Chief Engineer, P. W. D., Delhi	Supply of Iron and Steel work for record racks.	16 0
599 H.	23rd Jan. 1925	Port Canning and Land Improvement Co., Ltd., Canning Town, E. B. Railway.	Supply of Iron and Steel work for Husk Godown.	14 0
601 H.	Ditto .	Jardine Skinner & Co., A./C. Howrah Mills, Calcutta.	Supply of Angle Iron, F. S. Clips, bolts and nuts.	18 0
0613 H.	30th Jan. 1925	Nagpur Automobile and General Engineering Co., Ltd., Nagpur.	Supply of Iron and Steel work for Stables and Syces Quarters.	16 0
0621 J-H.	5th Feb 1925 .	Executive Engineer, O. and R. Railway, Lucknow.	Supply of Iron and Steel work for Loco. Shop Extension.	14 0
0628 J-H.	Ditto .	Ditto . . .	Supply of materials for Remodelling Passenger Platform.	14 0
0634 H.	12th Feb. 1925	Manager, Tara Tea Co., Ltd., Doom Dooma P. O., Upper Assam.	Supply of Iron and Steel work for Gantry.	15 0

Order No.	Date.	Constituents.	Particulars.	Average Rate.
				Per cwt.
				Rs. As.
635 H.	12th Feb. 1925	Chief Engineer, B.-N. Railway, Kidderpore.	Supply of Iron and Steel work for 4 spans of 12' Girders.	15 0
636 H.	Ditto .	Ditto . . .	Supply of Iron and Steel work for one open shed.	15 0
640 H.	16th Feb. 1925	Controller of Stores, E. I. Railway, Calcutta.	Supply of Iron and Steel work for Plate Girders for Grand Chord Extension.	15 0
641 H.	Ditto .	Macneill & Co., A./C. Maijan Tea, Calcutta.	Supply of Iron and Stee work for Tea House Extension.	1 0
579 H.	7th Jan. 1925 .	J. C. Bannerjee, Calcutta .	Supply of Iron and Steel work for Building.	13 0
647 H.	23rd Feb. 1925	Bhiwani Trading Co., Ltd., M./A. Hariana Cotton Mills, Calcutta.	Supply of 1 M. S. Covered Tank and Staging.	15 0
650 H.	24th Feb. 1925	Controller of Stores, E. I. Railway, Calcutta.	Supply of M. S. Bed Plates for 28'-8" span.	18 0
0666 H.	3rd Mar. 1925 .	Colliery Superintendent, Assam Railways and Trading Co., Ltd., Margherita, Assam.	Supply of Iron and Steel work for 2 spans of 77' and 69' Girders Bridges.	15 0
668 H.	5th Mar. 1925 .	Chief Engineer, B.-N. Railway, Kidderpore.	Supply of M. S. Staging	14 0
0670 L-H.	6th Mar. 1925 .	Proprietor, Dharmsala Tea Estate, Punjab.	Supply of Iron and Steel work for Bridge.	18 0
H.	9th Mar. 1925 .	Lieut.-General, Nepal Army, Katmandu.	Supply of Iron and Steel work for 5 Rice Godowns.	15 0
0680 J-H.	20th Mar. 1925	Commanding Royal Engineer, Allahabad, U. P.	Supply of Iron and Steel work for Saddlers Shop for Army Harness and Saddlery Factory, Cawnpore.	15 0
0686 H.	26th Mar. 1926	Lieut.-General, Nepal Army, Katmandu.	Supply of Iron and Steel work for 3 sheds.	16 0
689 H	31st Mar. 1925	Chief Engineer, E. B. Railway, Calcutta.	Supply of 22 Spans of B. G. Girders.	15 0
658 H.	3rd Mar. 1925 .	Deputy Chief Engineer, Port Commissioners, Kidderpore.	Supply of Iron and Steel work for one Import Shed No. 2.	12 0
660 H.	Ditto .	Ditto . . .	Supply of Iron and Steel work for No. 3 Import Shed.	12 0
662 H.	Ditto .	Deputy Chief Engineer, Port Commissioners, Kidderpore.	Supply of Iron and Steel work for No. 4 Import Shed.	12 0
664 H.	Ditto .	Ditto . . .	Supply of Iron and Steel work for Export Shed "A".	12 0
0638 M-H.	16th Feb. 1925	Thomas Burke, Esq., Bangalore	Supply of Trough Plates	15 0
0690 H.	3rd April 1925	Agency Engineer, O. F. States, Shambalpur.	Supply of Iron and Steel work for Dome.	15 0
694 H.	4th April 1925	Shaw Wallace & Co., A./C. Nazira Coal Co., Ltd., Calcutta.	Supply of 60 sets of M. S. Tub Frames.	18 0

Order No.	Date.	Constituents.	Particulars.	Average Rate.
				Per cwt.
				Rs. A.
0701 H.	9th April 1925	Lieut.-General Kaisar, Katamandu.	Supply of Iron and Steel work for 3 Rice Godowns.	16 0
707 H.	17th April 1925	James Finlay, A./C. Golabary Co., Ltd., Calcutta.	Supply of 1 Steel Chimney.	20 0
0711 J-H.	24th April 1925	Resident Engineer, R. & K. Railway, Izatnagar.	Supply of 3—10′ span Girders.	16 0
723 H.	4th May 1925 .	Controller of Stores, E. I. Railway, Calcutta.	Supply of 8 sets Supporting Gear consisting of Jack Girder, Lever Arms, etc.	15 0
724 H.	Ditto .	Ditto . . .	Supply of 3 Elevating Frames.	14 0
726 H.	Ditto .	Ditto . . .	Supply of 4 Gantries .	16 0
728 H.	Ditto .	Ditto . . .	Supply of 2 Spans of Trough Girders.	19 0
729 H.	Ditto .	Ditto . . .	Supply of Platform Joists, Erection Braces, Bolts, and Nuts, etc.	12 0
0737 J-H.	16th May 1925	A. P. Watal, Esq., Executive Engineer, II Sarda Canal Division, Pilibhit, U. P.	Supply of Iron and Steel work for two Unit sheds.	14 0
0742 H.	20th May 1925	Controller of Stores, C. I. C. Fields Railway, Ranchi.	Supply of 27 Trough Plates.	16 0
0745 J-H.	22nd May 1925	Resident Engineer, R. and K. Railway, Izatnagar.	Supply of Iron and Steel work for Girders Bridge	16 0
63 H.	28th May 1925	Bisseswarlal Monalal, Calcutta	Supply of Iron and Steel work for building.	11 0
0754 H.	5th June 1925 .	Executive Engineer, Jalpaiguri Division, Jalpaiguri.	Supply of Iron and Steel work for Record Rack.	19 0
757 H.	16th June 1925	Octavius Steel & Co., Ltd., A./C Dehri Rohtas Light Railway, Calcutta.	Supply of Iron and Steel work for Bridge and 6 M. S. Well Curbs.	17 0
0760 H.	30th June 1925	Officer in Charge, P. W. D., Sikkim, Gangtok.	Supply of Iron and Steel work for clear span Bridge.	15 0
763 H.	13th July 1925	Duncan Bros. & Co., Ltd., A./C. Cinnatolliah Tea Co., Ltd., Calcutta.	Supply of 12 M. S. trestles 10′ high and Plummer Blocks.	16 0
0764 J-H.	16th July 1925	Punjab Sugar Mills Co., Ltd., Gorakhpur.	Supply of one M. S. Chimney.	20 0
770 H.	6th Aug. 1925 .	Macneill & Co., A./C. Burtoll Tea Estate, Calcutta.	Supply of W. I. Chimneys	25 0
0773 H.	8th Aug. 1925 .	Babu Sandagar Mahto, Fatwa, Patna, Bihar and Orissa.	Supply of Iron and Steel work for roofing of Factory.	17 0
0781 L-H.	15th Aug. 1925	Bridge Engineer, N.-W. Railway, Jhelum.	Supply of Iron and Steel work for 40′ Span Bridge.	16 0
788 H.	19th Aug. 1925	Construction Engineer, R. C. T. C., Barrackpore.	Supply of Iron and Steel work for 2 Foot Over-Bridge.	16 0
0790 M-H.	26th Aug. 1925	Chief Engineer, M. & S. M. Railway, Madras.	Supply of Iron and Steel work for Foot Over-Bridge.	16 0

Order No.	Date.	Constituents.	Particulars.	Average Rate.
				Per cwt.
				Rs. A.
0792 J-H.	27th Aug. 1925	Executive Engineer, Headworks Division, Bareilly.	Supply of Iron and Steel work for 3 Gantries and 1 Travelling Overhead Trolley.	14 0
0776 B-H.	8th Aug. 1925 .	Burma Corporation, Namtu .	Supply of Steel Structures for additional Roofing to Coke Screening and Storage Plant.	11 0
803 H.	19th Sept. 1925	Macneill & Co., A./C. Labac Tea Estate, Calcutta.	Supply of Iron and Steel work for Bungalow.	15 0
806 H.	29th Sept. 1925	Duncan Bros. & Co., Ltd., A./C. Lankapara Tea Estate, Calcutta.	Supply of Iron and Steel work for Tea Factory.	14 0
808 H.	7th Oct. 1925	James Finlay & Co. Ld., A./C. Lattakoojan Tea Estate, Calcutta.	Supply of M. S. Columns, Angles, etc.	13 0
812 H.	Ditto .	Chief Engineer, B.-N. Railway, Kidderpore.	Supply of Iron and Steel work for Skew Bridge Girders.	14 0
816 H.	10th Oct. 1925	Barry & Co., A./C. Jenson and Nicholson, Calcutta.	Supply of Iron and Steel work for Building.	14 0
818 H.	Ditto	Tea Estates (India), Ltd., Calcutta.	Supply of Iron and Steel work for Stores Godown.	14 0
0824 H.	15th Oct. 1925	Chief Engineer, A.-B. Railway, Chittagong.	Supply of Iron and Steel work for Engine Shed.	14 0
827 H.	16th Oct. 1925	Begg Dunlop & Co., Ltd., A./C. Ranicherra Tea Co., Ltd., Calcutta.	Supply of Iron and Steel work for Roof.	15 0
835 H.	22nd Oct. 1925	James Finlay & Co., Ltd., A./C. Borhat Tea Estate, Calcutta.	Supply of Centre Posts, R. S. Beams, etc.	14 0
839 H.	29th Oct. 1925	Jardine Skinner & Co., A./C. Reliance Jute Mills Co., Ltd.	Supply of Iron and Steel work for Jute Mills.	16 0
841 H.	30th Oct. 1925	Construction Engineer, R. C. T. C., Barrackpore.	Supply of 2 Steel Stanchions.	12 0
842 H.	Ditto .	Balmer Lawrie & Co., Ltd., A./C. Murmah New Factory Tea Estate, Calcutta.	Supply of M. S. Pipes .	30 0
844 H.	4th Nov. 1925 .	Construction Engineer, R. C. T. C., Barrackpore.	Supply of Iron and Steel work for Tank and Staging.	20 0
0847 M-H.	11th Nov. 1925	Chief Engineer, Travancore, P. W. D.	Supply of Iron and Steel work for 10 Spans for Submersible Bridge at Minachil.	17 0
848 H.	Ditto .	Controller of Purchase, I. S. Department, Calcutta.	Supply of Trusses, Stanchions, etc.	16 8
0858 H.	7th Dec. 1925 .	Chief Engineer, A. B. Railway, Chittagong.	Supply of Steel work for Over-Bridge.	16 0
0887 J-H.	21st Jan. 1926	Empire Engineering Co., Cawnpore, U. P.	Supply of 3 Steel Well Curbs.	24 0
888 H.	22nd Jan. 1926	Golab Singh & Co., Ishapore, 24-Perganas.	Supply of R. S. Columns, etc.	13 0
804 H.	Ditto .	S. B. Bannerjee, Calcutta .	Supply of Iron and Steel work for Building.	13 0
0810 B-H.	25th Jan. 1926	Sooratee Bara Bazar, Rangoon	Supply of Plated Girders, etc.	16 0

Order No.	Date.	Constituents.	Particulars.	Average Rate.
				Per cwt. or per Rs. A.
0896 J-H.	5th Feb. 1925 .	Secretary, P. W. D., Rampur .	Supply of Staircase Beams for Ball Room.	12 0
0899 M.-H.	10th Feb. 1926	Sitaram Spinning and Weaving Mills, Ltd., Trichur.	Supply of Iron and Steel work for one open top Tank.	17 0
0904 B-H.	Ditto .	Burma Corporation, Ltd., Rangoon.	Supply of Iron and Steel work for Roof over Zinc Dams.	13 0
0917 S-H.	25th Feb. 1926	State Engineer, Rewa State, Rewa.	Supply of Iron and Steel work for one Road Bridge, 24' Span.	13 0
908 H.	19th Feb. 1926	Construction Engineer, R. C. T. C., Barrackpore.	Supply of Iron and Steel work for 2nd Enclosure Grand Stand.	14 0
913 H.	Ditto .	Ditto . . .	Supply of Iron and Steel work for 1st Enclosure, Totalizator and one Indicator Board.	12 0
0931 H.	15th Mar. 1926	Engineer-in-Chief, Vizagapatam Harbour, Vizagapatam.	Supply of 37 Steel Well Curbs for Monoliths.	14 0
0937 H.	26th Mar. 1926	Rai Sahib Kharga Bahadur Chettry.	Supply of Iron and Steel work for a Bridge of 60' span.	17 0
940 H.	Ditto .	Duncan Bros. Co., Ltd., Calcutta.	Supply of Iron and Steel work for Shed.	16 0
012076 L-H.	31st Mar. 1926	Executive Engineer, Rawalpindi.	Supply of M. S. Trough Plates.	17 0
0951 H.	7th April 1926	Agency Engineer, O. F. States, Sambalpur.	Supply of Iron and Steel work for 3 spans of 200' Girders.	15 0
0952 H.	Ditto .	Ditto . . .	Supply of Iron and Steel work for 3 spans of 200' Girders.	15 0
0953 B-H.	Ditto .	Superintendent of Stores, P. W. D., Burma.	Supply of 5 M. S. Piles	13 0
0954 H.	Ditto .	Ram Dulal Hazra, Zemindar, Ondal, District Burdwan.	Supply of Iron and Steel work for one shed.	16 0
956 H.	8th April 1926	Chief Engineer, B.-N. Railway, Kidderpore.	Supply of Iron and Steel work for one span of 40' Girders.	13 0
932 H.	31st Mar. 1926	Construction Engineer, R. C. T. C., Barrackpore.	Supply of Iron and Steel work for 2nd and 3rd Enclosure Totalizators.	12 0
L-H.	21st April 1926	District Engineer, Bikaner State, Bikaner.	Supply of one open top Tank.	16 0
971 H.	30th April 1926	Andrew Yule & Co., Ltd., A./C. Bengal-Nagpur Coal Co., Calcutta.	Supply of Iron and Steel work for Boiler House Roof.	16 0
0973 H.	4th May 1926 .	Agricultural Engineer, C. P., Nagpur.	Supply of Iron and Steel work for Lecture Hall.	15 0
0974 B-H.	Ditto .	Chief Engineer, Burma Rail way, Rangoon.	Supply of 2 Island Platform Shed.	13 0
977 H.	7th May 1926 .	Chief Engineer, E. B. Railway, Calcutta.	Supply of Iron and Steel work in 8 spans for Steel Girders.	12 0
98. H	8th May 1926 .	Controller of Stores, E. B. Railway, Sealdah.	Supply of 200 Sets of end Longitudinal Girders.	12 0

Order No.	Date.	Constituents.	Particulars.	Average Rate.
				Per cwt.
				Rs. A.
0982 M-H.	12th May 1926	Engineer-in-Chief, S. I. Railway, Trichinopoly.	Supply of Iron and Steel work for 4 Hemispherical Tanks.	15 0
0983 M-H.	Ditto	Ditto	Supply of Iron and Steel work for 3 Hemispherical Tanks.	15 0
0991 M-H.	22nd May 1926	Acting Chief Engineer, S. I. Railway, Trichinopoly.	Supply of Iron and Steel work for one 60' Span Girder Bridge.	13 0
0999 J-H.	2nd June 1926	Chairman, District Board, Pauri Garhwal, U. P.	Supply of Iron and Steel work for one Bridge of 66' Span.	17 0
02 H.	Ditto	Rai Sahib B. C. Mazumdar, Kalahandi,	Supply of Iron and Steel work for Bridge.	14 0
10 H.	11th June 1926	Begg Dunlop & Co., Ltd., A./C. Jorehaut Tea Co., Ltd., Calcutta.	Supply of one Braced Iron Staging,	14 0
018 L-H.	18th June 1926	Chief Engineer and Secretary, Railway, His Highness's Government, Patiala.	Supply of Iron and Steel work for 24 Spans of 40' Girders.	13 0
019 L-H.	19th June 1926	Jairam Valjee, Raigarh, B.-N. Railway,	Supply of Iron and Steel work for one shed.	13 0
020 H.	22nd June 1926	Engineer-in-Chief, Vizagapatam Harbour, Vizagapatam.	Supply of Iron and Steel work for one Mooring Jetty.	12 0
028 L-H.	30th June 1926	Engineer-in-Chief, Surveys and Construction, N.-W. Railway, Moghalpura.	Supply of Iron and Steel work for 10 spans of 10' Girders.	12 0
035 M-H.	7th July 1926	Acting Chief Engineer, S. I. Railway Co., Ltd., Trichinopoly.	Supply of Iron and Steel work for 10 spans of 20' Girders.	12 8
036 M-H.	Ditto	Ditto	Supply of Iron and Steel work for 2 spans Girders.	13 8
92 K.	1st April 1924	Macneill & Co., A./C. Equitable Coal Co., Ltd., Calcutta.	Supply of Iron and Steel work for 50' Pit Head Gear.	13 0
106 K	Ditto	Kilburn & Co., Ltd., A./C. Tata Iron and Steel Co., Ltd., Calcutta.	Supply of Iron and Steel work for Jamadoba Coal Handling Plant.	16 0
125 K.	Ditto	Villiers Ld., A./C. Talcher Colliery, Calcutta.	Supply of Iron and Steel work for 40' Pit Head Gear.	15 0
174 K.	30th July 1924	Kilburn & Co., A./C. Tata Iron and Steel Co., Ltd., Calcutta,	Supply of Coal Handling Plant at Jamadoba.	17 0
247 K.	19th May 1924	Chief Engineer, B.-N. Railway, Kidderpore.	Supply of Iron and Steel work for 15 spans of 40' Girders.	15 0
038 L-K.	20th May 1924	Chief Controller of Stores, I. S. D., Delhi.	Supply of Iron and Steel work for Roofing of Library.	15 0
261 K.	4th June 1924	Chief Engineer, Port Commissioners, Calcutta.	Supply of 130 R. S. Beams.	12 0
0319 J-K.	25th July 1924	Chief Engineer, O. and R. Railway, Lucknow.	Supply of Iron and Steel work for 50' Span "through" Girders.	14 0

Order No.	Date.	Constituents.	Particulars.	Average Rate.
				Per cwt.
				Rs. A.
0332 K.	25th July 1924	Engineer in-Chief, Central Indian Coal Fields Railway, Ranchi.	Supply of Iron and Steel work for Shed.	12 0
0355 L-K.	21st May 1924	Executive Sanitary Engineer, No. 1 Sanitary Provincial Division, Rawalpindi.	Supply of Iron and Steel work for Tank and Staging for Rawalpindi Water Supply Scheme.	15 0
0370 S-K.	30th July 1924	Superintendent Engineer Contractor, B., B. and C. I. Railway, Bombay.	Supply of Iron and Steel work for one Foot Over-Bridge at Bandra.	16 0
0371 S-K.	Ditto .	Ditto . . .	Supply of Iron and Steel work for one Foot Over-Bridge at Kandivellee.	16 0
0372 S-K.	Ditto .	Ditto . . .	Supply of Iron and Steel work for one Foot Over-Bridge at Vile Parle.	16 0
0373 S-K.	Ditto .	Ditto . . .	Supply of Iron and Steel work for one Foot Over-Bridge at Sunta Cruz.	16 0
0374 S-K.	Ditto .	Ditto . . .	Supply of Iron and Steel work for one Foot Over-Bridge at Andheri.	16 0
0375 S-K.	Ditto .	Ditto . . .	Supply of Iron and Steel work for one Foot Over-Bridge at Malad.	16 0
0384 L-K.	31st July 1924	Chief Controller of Stores, I. S. D., Simla.	Supply of Iron and Steel work for Bridge at Sulemanki.	14 8
343 K.	14th Aug. 1924	Kilburn & Co., A./C. Raneegunge Coal Association, Ltd., Calcutta.	Supply of Iron and Steel work for Roofing.	16 8
0408 K.	Ditto .	Engineer-in-Chief, Central India Coal Field Railway, Ranchi.	Supply of Iron and Steel work for Shedding.	12 0
462 K.	30th Sep. 1924	Burma Oil Co., Ltd., Calcutta	Supply of 2 M. S. Oil Tanks.	18 0
0484 K.	21st Oct. 1924	Engineer-in-Chief, C. I. C. Railway, Ranchi.	Supply of Iron and Steel work for shedding.	12 0
496 K.	6th Nov. 1924	Chief Engineer, B. N. Railway, Kidderpore.	Supply of Iron and Steel work for 2 Spans of 40' Girders.	14 0
0554 J-K.	18th Dec. 1924	Chief Engineer, O. & R. Railway, Lucknow.	Supply of Iron and Steel work for 7 Spans of 60' Standard Plate Girders.	16 0
0 567 S-K.	30th Dec. 1924	Chief Engineer, B. B. and C. I. Railway, Bombay.	Supply of Iron and Steel work for Foot Over-bridge at Ahmedabad.	16 0
0578 J-K.	6th Jan. 1925 .	Chief Engineer, O. and R. Railway, Lucknow.	Supply of Iron and Steel work for 6 Spans of 60' Girders.	16 0
605 K.	26th Jan. 1925	Chief Engineer, B. N. Railway, Kidderpore.	Supply of Iron and Steel work for 1 Span of 40' Girders.	16 0

Order No.	Date.	Constituents.	Particulars	Average Rate.
				Per cwt.
				Rs. A.
0614 L-K.	30th Jan. 1925	Chief Controller of Stores, I. S. D., Delhi.	Supply of Iron and Steel work for 2 Fuel Oil Storage Tanks, 200 tons capacity.	18 0
0627 S-K.	12th Feb. 1925	State Engineer, Rewa State, Sutna, E. I. Railway.	Supply of Iron and Steel work for 24 Double Racks.	16 0
640 K .	16th Feb. 1925	Controller of Stores, E. I. Railway, Calcutta.	Supply of Iron and Steel work for 20 spans of 60' Plate Girders.	15 0
675 K	17th Mar. 1925	Indian Co., Ltd., Calcutta .	Supply of Iron and Steel work for Shed.	10 0
0628 J-K.	8th April 1925	Chief Engineer, O. and R. Railway, Lucknow.	Supply of Iron and Steel work for Moradabad Round House and Workshop.	17 8
0772 J-K.	8th Aug. 1925 .	Executive Engineer, Head Works Division, Sarda Canal, Bareilly.	Supply of Iron and Steel work for 4 Unit Sheds.	16 0
813 K.	7th Oct. 1925 .	Chief Engineer, B.-N. Railway, Kidderpore.	Supply of Iron and Steel work for 5 Spans of 40' Girders.	14 8
828 K.	16th Oct. 1925	Kilburn & Co., Colliery Department, Calcutta.	Supply of M. S. Bracings, etc.	12 0
833 K.	4th Nov. 1925 .	Construction Engineer, R. C. T. C., Barrackpore.	Supply of Iron and Steel work for Grand Stand at Race Course.	15 0
0845 K.	31st Oct. 1925	Agency Engineer, O. F. States, Sambalpur.	Supply of Iron and Steel work for Kusmi Bridge.	17 8
878 K.	7th Jan. 1926 .	Controller of Stores, E. I. Railway, Calcutta.	Supply of Iron and Steel work for 45 Spans of 60' M. S. Plate Girders.	13 8
K.	11th Jan. 1926	Agency Engineer, O. F. States, Sambalpur.	Supply of 10 Steel Cofferdam Well Curbs.	18 0
0892 L-K.	23rd Jan. 1926	Divisional Engineer, Irrigation Division, Jammu.	Supply of Iron and Steel work for 2 Steel Flume Aqueducts.	17 8
0915 M-K.	23rd Feb. 1926	Chief Engineer, M. and S. M. Railway, Madras.	Supply of Steel work for Foot Over-Bridge at Perambur Carriage and Wagon Station.	12 8
950 K.	7th April 1926	Engineer-in-Chief, Calcutta Chord Railway, Calcutta.	Supply of 4 Caissons for Bally Bridge.	13 0
0961 K.	15th April 1926	Revd. A. Geernert, S. J., Roman Catholic Mission, Hamirpur.	Supply of Iron and Steel work.	16 0
0988 K.	19th May 1926	Engineer-in-Chief, Vizagapatam Harbour, Vizagapatam.	Supply of 16 Combined Steel Centres for Monoliths.	18 0

Enclosure No. 9.

53 Spans of 94' 6" for North Western Railway.

Total weight of one Girder—24 tons.

If shipped in three pieces with diagonal and vertical numbers and gussets to same shipped loose.

6 pieces of boom averaging 2¼ ton each and 32 feet long, and the other 10½ tons in pieces about 10 feet 6 inches long, weighing 6 cwt. to ¼ ton each.

If shipped rivetted up complete in 5 pieces weight of each piece 6 tons.

	£ s. d.	£ s. d.
Home price c.i.f. Karachi 24 tons at .	16 8 6	= 394 4 0
For f.o.b. price *deduct* freight—		
On 13½ tons at £3-16-0 per ton . .	= 47 5 0	
On 10½ tons at £2-0-0 per ton . .	= 21 0 0	
	68 5 0	
Less 5 per cent rebate . .	3 8 3	
		64 16 9
		329 7 3
	£ s. d.	
F.o.b. price of 214 cwt. of sections at £6-7-0 per ton	67 18 11	
F.o.b. prices of 226 cwt. of plates at £7-2-0 per ton	80 4 7	
F.o.b. price of 40 of rivets at £12-2-9 per ton	24 5 6	
Add for paint Rs. 160 on 24 tons at 1/6 exchange	12 0 0	
		184 9 0
		144 18 3

£144 on 24 tons = £6 per ton.

48 spans of 60 ft. girders imported by the Madras and Southern Mahratta Railway from the Furnace Ship Building Company at . . .	= £13- 8-0 per ton f.o.b.
Deduct material as above	= £ 7-14-0 per ton f.o.b.
Labour .	= £ 5-14-0 per ton

(8) *Letter No. 653, dated 18th August 1926, from the Secretary, Tariff Board, to Messrs. Jessop and Company, Limited, Howrah.*

I am directed to ask if you will kindly furnish the Tariff Board with figures showing your total output (in tons) of fabricated steel work for the periods:—

1st April 1924 to 31st March 1925.

1st April 1925 to 31st March 1926.

I am to say that the Board would be obliged if these figures could be supplied as soon as possible.

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(9) *Letter from Messrs. Jessop and Company, Limited, dated the 19th August 1926.*

In attention to your letter No. 653, dated 18th instant, we have pleasure in sending you 7 copies of a statement showing our total output (in tons) of fabricated steel work for periods:—

1st April 1924 to 31st March 1925.

1st April 1925 to 31st March 1926.

TONNAGE OUTPUT OF FABRICATED STEEL.

	1st April 1924 to 31st March 1925.	1st April 1925 to 31st March 1
	Tons.	Tons.
Structural Works, Howrah . . .	6,018	6,656
Structural Works, Jamshedpur . .	1,897	2,842
	7,915	9,498

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(10) *Letter from the Secretary, Tariff Board, to Messrs. Jessop and Company, Limited, Calcutta, No. 718, dated 2nd September 1926.*

I am directed to request you to supply the Tariff Board with a statement (with 6 spare copies) showing your monthly output of wagons for the first seven months of 1926. If for any special reasons, the output for any particular month shows a large increase or reduction, please give an explanation of such increase or reduction.

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(11) *Letter from Messrs. Jessop and Company, Limited, to the Secretary, Tariff Board, Calcutta, dated 3rd September 1926.*

Referring to your letter No. 718, dated 2nd instant, we regret we had no output of wagons during the first seven months of 1926 owing to a lack of orders.

MESSRS. JESSOP AND COMPANY, LIMITED.

B.—ORAL.

Evidence of Mr. A. E. HEFFERAN, representing Messrs. Jessop and Company, recorded at Calcutta, on Friday, the 23rd July, 1926.

Location and capacity of works.

President.—What position do you hold in Messrs. Jessop and Company?

Mr. Hefferan.—I am the Senior Assistant and sign *per pro.*

President.—Are you in charge of the general engineering as well as the wagon building departments of Messrs. Jessop and Company?

Mr. Hefferan.—Yes.

President.—Your general engineering works are at Howrah?

Mr. Hefferan.—Yes.

President.—Part of your wagon building plant is at Garden Reach which will shortly be moved to Dum Dum and part is at Jamshedpur.

Mr. Hefferan.—Yes. At Jamshedpur we have got structural works with some facilities for building wagons but at Garden Reach we are entirely equipped for wagons.

President.—It has its own complete equipment?

Mr. Hefferan.—It has power. It is not entirely equipped to be self-supporting. Though most of the fabrication work is done at Garden Reach, part of the forging is done at Howrah.

President.—That is to say, most of the assembling is done at Garden Reach.

Mr. Hefferan.—Cutting and shaping of the parts of the underframe and wagon are done at Garden Reach. A portion of the forging is also done at Garden Reach and a portion at Howrah, as we have not got enough room at Garden Reach, but that will be altered when we go to Dum Dum.

President.—When you go to Dum Dum, will you have a complete equipment there?

Mr. Hefferan.—Yes.

President.—For doing the whole fabrication and forging.

Mr. Hefferan.—Everything.

President.—When do you expect to complete your plant at Dum Dum?

Mr. Hefferan.—We shall be going at Dum Dum from about the beginning of October.

President.—When will you actually start working?

Mr. Hefferan.—Beginning of October.

President.—Are you taking your old plant there?

Mr. Hefferan.—Yes.

President.—Are you not going to get any new plant?

Mr. Hefferan.—We shall be getting new plant in February. At the present moment we are moving the old plant from Garden Reach.

President.—What arrangements will you make for your fuel and power?

Mr. Hefferan.—The Electric Supply Corporation will give us current and for the smiths' shop we have got two boilers 30′ × 8′.

President.—You will erect your furnaces there.

Mr. Hefferan.—Yes. The furnaces will be old but they will have new brick work.

President.—It is rather inconvenient for the Board that at this particular moment you should be transferring your works from Garden Reach to Dum Dum for we are not in a position to say in what state your plant is in now. We cannot make any comparison between your plant and other plants because it is not there.

Mr. Hefferan.—No, you cannot do that.

President.—What is the capacity of your plant?

Mr. Hefferan.—At Garden Reach or at Dum Dum?

President.—At Dum Dum.

Mr. Hefferan.—It may be anything. It is unlimited. It will just depend on the business that is offering.

President.—Surely it cannot be unlimited.

Mr. Hefferan.—Because the plant can be added to very rapidly.

President.—Supposing you had the same plant?

Mr. Hefferan.—600 wagons per year with exactly the same plant.

President.—There you will go in for underframes.

Mr. Hefferan.—Yes.

President.—How many underframes can you offer?

Mr. Hefferan.—150.

President.—Will they be done at Dum Dum?

Mr. Hefferan.—Yes.

President.—Where are they done now?

Mr. Hefferan.—The last underframe order was executed at Garden Reach.

President.—For how many?

Mr. Hefferan.—98 N. W. R.

Mr. Mather.—Did you complete the order in one year?

Mr. Hefferan.—Yes, not from the date of the order but from the date we started on the material. It takes five months to get the materials out.

President.—When you say 600 wagons a year, do you mean from the date of the order or what?

Mr. Hefferan.—From the date we get our material. Supposing we do not get any material for 8 months, we cannot deliver wagons. It takes us five months to get our materials.

President.—That is a sort of recurring disability.

Mr. Hefferan.—Yes.

President.—So, in the long run, your capacity will be unaffected.

Mr. Hefferan.—The capacity is 600 wagons a year. The Railway Board promised to call for tenders in June this year for their requirements next year. That would have given us ample time. They now consider the I. R. C. A. designs defective. Personally I don't think that we shall get the new designs passed finally till October 1927, though they say October this year. As soon as the designs are passed by them—they are now being made by a Committee—they will go to the Railway Board and the Railway Board will send them to their Consulting Engineers in Britain and by the time we get formal confirmation of those drawings, it will be October 1927.

Mr. Mather.—Even for the confirmation of the drawings?

Mr. Hefferan.—The drawings are now in course of preparation.

Mr. Mather.—Do you mean that you don't think that the drawings will be confirmed till October 1927 and therefore orders could not be placed till January 1928?

Mr. Hefferan.—That is my opinion although they have indicated that they will be ready with their call for tenders by October this year. I think they are optimistic.

Mr. Mather.—I suppose they think you are pessimistic.

Mr. Hefferan.—I know how long it takes to prepare a new design for a wagon.

President.—That is just speaking from your experience.

Mr. Hefferan.—Yes, and not from any actual inside information.

Fabricated steel.

President.—We will first of all deal with fabricated steel. On page 252, you say "The fact we have set out to prove is that the conditions affecting the engineering industry are worse to-day than in 1923 and 1925 and it is essential if Indian Engineering Industries are to be kept alive that the principle of the Steel Protection Act of 1924 must be extended for a further period." Your contention that the engineering industry is worse off to-day than in 1923 and 1925 is based merely on a calculation.

Mr. Hefferan.—Yes, on an average calculation of the relative costs.

President.—But I don't think that that is a correct way of establishing that proposition. You simply take the figures that we took in 1923-24.

Mr. Hefferan.—We have got some new figures here.

President.—Where have you got them?

Mr. Hefferan.—The original cost of material was taken at Rs. 160.

President.—In 1923-24 we took this figure. Then you must show your present costs—not with reference to what we said before. Then you have got to show—I think we took the c.i.f. price of British fabricated steel at Rs. 250 at that time—that to-day the c.i.f. price of British steel was so much less. You were expected to get Rs. 60 under our scheme and to-day for that reason you were getting so much less but no attempt has been made to give evidence on those lines.

Mr. Hefferan.—Fabricated steel ranges from putting two holes in a beam up to a point of making domes which we did for the Legislative Council at Delhi. In the one case we would be paying our men at six annas a cwt. In the case of domes we pay at Rs. 4-8-0 a cwt.

President.—The same thing would apply to the British manufacturer.

Mr. Hefferan.—Yes. When we talk of fabricated steel we can only assume a very general average.

President.—You take a girder span or something like that; we took a bridge span. It is neither very difficult nor very simple. It is just midway between the two.

Mr. Hefferan.—It is difficult to get many examples of actual bridge spans being imported. Government are reticent and they will not give us the prices. We have gleaned together an instance where the Madras and Southern Mahratta Railway imported 48 spans of 60 ft. girders at £13-8-0 per ton f. o. b.

Mr. Mather.—When was that?

Mr. Hefferan.—Early this year.

President.—What was the freight and insurance?

Mr. Hefferan.—Now we will begin to assume things. I do not know what the Government will pay or what that Railway paid. If we were importing those spans, they would charge us £6 a ton for pieces over 5 tons. But Government have some arrangements with the shipping companies.

Mr. Mather.—The Madras and Southern Mahratta Railway is not a State Railway.

Mr. Hefferan.—Practically all big railways have some arrangements with the carrying companies and they won't divulge these figures. We cannot get them. We hear casually that the £13-8-0 per ton f. o. b. represents Rs. 15-11-0 a cwt. landed in Madras.

Mr. Mather.—For what?

Mr. Hefferan.—For delivery in Madras. But we cannot vouch for that figure.

President.—Does that include duty?

Mr. Hefferan.—Yes, but they will get a rebate. They will get their duty refunded. Whether they have taken that or not, I cannot say. The Hon'ble Member for Commerce told us in a letter that the provinces get a refund of the duty.

Mr. Mathias.—The provinces get a refund; it is not refunded to the Department concerned but credited to Provincial revenues under a separate head.

Mr. Hefferan.—May be.

President.—On these figures there is no reason why you should not be able to compete. If Rs. 15-11-0 a cwt. is the price delivered in Madras, that gives you a price of Rs. 314 a ton whereas you do not want nearly as much.

Mr. Hefferan.—We should have to add the freight to anything we sent to Madras.

President.—But according to your statement you should be satisfied if you got Rs. 253 f.o.r. works. Even if you had to pay the freight there is still a very big margin.

Mr. Hefferan.—But the Company railways will not have anything to do with us unless you make it dear enough for them to come here.

President.—It is dear enough for them on these figures.

Mr. Hefferan.—They only put on 25 per cent. on the landed cost as the duty. They are agreeable to pay that. If that duty were more than that, would they not give us an opportunity to quote here?

President.—You cannot force the prices up like that. If with a duty which leaves you a margin of Rs. 61, which is really about 20 per cent. you cannot get any orders, you will never get them.

Mr. Hefferan.—Your duty is not going to put the prices up to the railways because internal competition in India will not let us get it. If we had internal competition in India we should quote about Rs. 250 at the outside whatever the duty was. There are Burns, ourselves, John King, Vulcan Iron Works, Balmer Lawrie and others who are struggling for work. They would not let Jessops take it at Rs. 300 because the tariff was high. The idea is that if the tariff is sufficiently high to encourage purchasers to place orders in India, they won't pay the full cost brought about by the duty because there is competition between the dozen firms here and the work is not sufficient to keep all our works going. We are always hankering after more business and that will keep the prices down. Our capacity for girder work has been increased considerably during and after the war. You are not fixing the price, you are fixing a tariff that will induce the purchaser to place his order in India. He won't necessarily have to pay the full value due to the tariff because of the competition.

President.—Have you received any orders within the last 12 months for fabricated steel?

Mr. Hefferan.—Yes.

President.—Will you please tell us what they were?

Mr. Hefferan.—We received an order from the Calcutta Port Commissioners for all their sheds.

President.—What rates did you receive?

Mr. Hefferan.—There were about 40 different rates.

President.—Have you not received any orders for bridgework girders and things like that?

Mr. Hefferan.—Yes, we got an order for some East Indian Railway 60' spans.

President.—When did you get the order?

Mr. Hefferan.—We shall have to look that up, and give you the exact date. We shared the order with Braithwaites.

President.—What was the rate?

Mr. Hefferan.—I cannot tell you from memory. I could look it up and let you know later.

President.—I want to know what orders you here received since March 1924 for fabricated steel, the people from whom you got the orders and the rate at which you got them. We would like also to have the date of the orders and the place where the fabricated sheet was to be delivered.

Mr. Hefferan.—Yes.

President.—Are your contracts generally for prices f.o.r. works?

Mr. Hefferan.—Yes.

President.—In every case?

Mr. Hefferan.—Oftener than not.

President.—You may say whether the rates were f.o.r. works or elsewhere. If elsewhere you can let us have the freight.

Mr. Hefferan.—When we work for the railways it all goes at a concessional rate.

President.—But when you have got to pay the freight yourselves, for example, when the work is for a public body?

Mr. Hefferan.—I will give you that.

President.—We shall try and get the c.i.f. price of imported fabricated steel.

Mr. Hefferan.—I have got another instance of a 94′–6″ 53 spans. The British price was £16-8-6 per ton c.i.f. Karachi. That enquiry was placed on the market.

President.—You would not ordinarily get an order like that because you have got to rail your material from here whereas the North Western Railway will take it on its own line from Karachi.

Mr. Hefferan.—But they must have got quotations from Herman and Mohatta as well as Richardson and Cruddas. The enquiry was placed on the market here but the order went Home.

President.—It must be that local Engineers did not tender low enough.

Mr. Hefferan.—The British manufacturer was able to underquote us.

President.—If you want Rs. 253 Messrs. Richardson and Cruddas cannot ask for more. If they gave a much higher quotation than this then naturally the orders would go abroad.

Mr. Hefferan.—That Rs. 253 is only an average price. It is not a correct figure for all examples of structural work. These longer spans cost more money to make. We have got to pay more per ton for making it. All these figures in here are only average costs. You cannot get a fixed price from anybody. Supposing we get two quotations from Great Britain for the same thing they won't agree. We engineering people contend that when we ask for protection it must be full otherwise we shall not get any benefit from protection. Most people think if you give 25 per cent. or 30 per cent. preference, people in India will have to pay the full amount of that preference. Internal competition will not permit it.

President.—If you take Rs. 275 as the price then on your own calculations it is Rs. 22 more.

Mr. Hefferan.—That is assuming that every job that is going can be done at this price. Some jobs take much more to do and others much less.

President.—What price are we to take? We must assume some sort of standard.

Mr. Hefferan.—You can only take a middling price which is the average price.

President.—That we did take and you have given us your costs on that basis. We took bridgework, I think, in our first report.

Mr. Hefferan.—That is an article which ranges from 6′ spans to 140′ or even 150′ spans. The cost of that work is not all uniform. If we had to

make, say, 130′ spans we would really have to pay four or five times more for them than for, say, a 6′ span. The work in the latter is very simple.

Mr. Mather.—We agree that there will not be a uniform cost and therefore we must use an average. But you seem to be content in your own representation to take an average and now you say that you cannot accept an average figure.

Mr. Hefferan.—When you take the British quotation, you take a high class work and compare it with the work here which averages from a 6′ span to a 150′ span. The comparison is not fair.

Mr. Mathias.—Can you give us a case where the figures are comparable?

Mr. Hefferan.—If it were a 40′ span I think it would be comparable. Have you any information about the price of 40′ span?

Mr. Mather.—Yes, it is Rs. 250 a ton.

Mr. Hefferan.—We cannot do it at Rs. 250 per ton.

Mr. Mather.—The price in July last year for an imported 40′ span was Rs. 270.

Mr. Hefferan.—You have not got any recent example here on this side of India of a 40 ft. span fetching Rs. 270 per ton.

Mr. Mather.—You yourself pointed out that you had an order for the East Indian Railway on this side of India recently for spans.

Mr. Hefferan.—That was not settled in competition with Britain. It is purely an Indian enquiry. They wanted them rather in a hurry and they did not send the enquiry home.

Mr. Mather.—What price did you quote for that?

Mr. Hefferan.—I will have to look it up.

Mr. Mathias.—Can you give us any idea as to the number of orders you lost owing to foreign competition? How does it affect you?

Mr. Hefferan.—It is very difficult to get that information.

Mr. Mathias.—Can you tell us whether you are working to your full capacity at present?

Mr. Hefferan.—No.

Mr. Mathias.—Only half?

Mr. Hefferan.—We are not working to the full. In the course of a few months when we shall have finished the order for the Port Commissioners' shed at Kidderpore dock, our place will be practically empty.

Mr. Mathias.—Can't you give us some idea whether that is due to slackness in trade or whether that is due to competition from abroad?

Mr. Hefferan.—I don't think anybody can make any definite statement. A certain amount of slackness in trade has to be admitted. The last report of the Railway Board showed where they had a certain amount of bridge work to be placed (it was worth Rs. 46 lakhs). The Indian purchases were only Rs. 5 lakhs.

Dr. Matthai.—There has been an improvement on 1923.

Mr. Hefferan.—Aren't you out to improve until we are able to do all the work offering in India?

Dr. Matthai.—You have improved.

Mr. Hefferan.—We are not satisfied with the speed of the improvement. Are you?

Dr. Matthai.—It is not for me to answer.

Mr. Mathias.—You are referring to the report of 1924-25.

Mr. Hefferan.—Yes, we have got nothing later than that.

Mr. Mathias.—You could hardly expect the full effect of the protective duty which was imposed by that time.

Mr. Hefferan.—We have no figures.

Mr. Mathias.—You said to Dr. Matthai that you consider Rs. 5 lakhs out of Rs. 46 lakhs are no improvement at all over the 1923 figure.

Dr. Matthai.—In 1923 the Indian proportion was 5 per cent. of the total. Here it is 10 per cent. of the total.

Mr. Hefferan.—I think the total was higher then.

Dr. Matthai.—Out of the total purchase of about Rs. 80,00,000 in 1923, India got Rs. 5 lakhs. Here you get a little more than 5. The proportion of Indian purchase has distinctly increased since 1924.

Mr. Hefferan.—Yes, but then if that increase does not fill us with work, it is not possible for us to reduce our cost as rapidly as would be the case if we were given full opportunity and full scope to work our machines and plant to their full extent. Our overhead charges would be spread over a greater amount of material.

Dr. Matthai.—Last year Mr. Roddick told us that the position in 1925 was better than the position in 1924.

Mr. Hefferan.—To the extent that we got Rs. 5 lakhs out of Rs. 46 lakhs.

Dr. Matthai.—Speaking from your own point of view the position of Messrs. Jessop and Company was better in 1925 than in 1924.

Mr. Hefferan.—We have reduced our overhead by reducing the cost of fabrication from Rs. 117 to Rs. 112. It is done purely on overhead charges. The rates paid to our workmen have not been reduced.

President.—The reduction was partly due to the exchange. The price of coal had also come down.

Mr. Hefferan.—This year the price of coal has not come down much.

President.—How did you arrive at the figure of Rs. 110. That is the important point?

Mr. Hefferan.—That is an average.

President.—How did you get the average?

Mr. Hefferan.—That is the figure we gave you 12 or 15 months ago.

President.—You always work from our figure of Rs. 117.

Mr. Hefferan.—We got our figure by averaging the amount.

President.—Rs. 117 is the figure in our first report. Every time you come up here you try to work down that figure of Rs. 117. You have brought it down to Rs. 110 and the rest of the figures remain the same.

Mr. Hefferan.—There is no other figure.

President.—I want to know whether this Rs. 110 correctly represents the cost of fabrication to-day.

Mr. Hefferan.—We reckon Rs. 110.

President.—How do you arrive at that figure of Rs. 110?

Mr. Hefferan.—By averaging the price we pay for fabrication and adding the overhead charges. We pay a certain price for converting our material into girders or roof trusses and we average that. Having averaged that, we arrive at a figure of Rs. 110. If it were one product we were making, we could give you an exact figure absolutely from our books straight. If we were making a number of miscellaneous things, it is impossible to put any one figure down there and say that that is the figure to take. We can only give you the average figure.

Mr. Mather.—How much of that Rs. 110 is overhead?

Mr. Hefferan.—50 per cent. of that is overhead.

President.—What do you include in the overhead?

Mr. Hefferan.—All our direct charges by way of power, fuel, rents, taxes, supervision, etc.

Dr. Matthai.—Everything above material and direct labour.

Mr. Hefferan.—Everything above productive material. We have two classes of material, productive and non-productive. Productive material is

that product which goes into the job and goes out. Non-productive material is such material as is used to convert this other raw material into the recognised article and that doesn't go out. We get nothing for that.

President.—Do you inculde depreciation, profits and everything?

Mr. Hefferan.—Yes.

Mr. Mather.—That means Rs. 55 per ton for overhead. Supposing your shop was fully employed and your fixed charges divided by a larger output, what would it come down to.

Mr. Hefferan.—You will have to give me a concrete example.

Mr. Mather.—If your shops had been fully employed during that year—suppose you actually turned out 5,000 tons of finished work and if you had done 10,000 tons, then obviously your overhead charge would be reduced by Rs. 27-8-0.

Mr. Hefferan.—If we did twice the amount of work, then it would be reduced.

Mr. Mather.—That is my point.

Mr. Hefferan.—If we could double the output, we would reduce our overhead.

Mr. Mather.—This overhead charge of Rs. 55 is based on conditions that your works were not fully employed and if we got the estimated overhead charge when the works would be fully employed, that overhead charge would come down substantially.

Mr. Hefferan.—Yes.

Mr. Mather.—I am supposing that it might come down in proportion to the increase of output.

Mr. Hefferan.—No. This Rs. 55 carries a profit of 5 per cent.

Mr. Mather.—5 per cent. on what?

Mr Hefferan.—On Rs. 250.

Mr. Mather.—On the turnover.

Mr Hefferan.—Yes. That is Rs. 12-8-0. If we deduct that Rs. 12-8-0 from Rs. 55 it comes to Rs. 42-8-0 which would be halved. Rs. 12-8-0 we should still want.

Mr. Mather.—Then if you double your output, your conversion cost would come down by about Rs. 20 a ton.

Mr. Hefferan.—Yes. There are two things that contribute to our high cost. One is the disparity between the wages of the worker and the wages paid to our foreman. That disparity is very much greater out here than in Great Britain. If an artisan in Britain were paid £4 a week the foreman would not want much more. Here if an artisan is getting Rs. 60 a month, the foreman wants Rs. 600. Until opportunities are given to the Indian population to become mechanical engineers or structural engineers, you won't be able to do much good.

Mr. Mather.—You have been giving these opportunities for 100 years.

Mr. Hefferan.—No, we cant't do that. The opportunity which the man gets doesn't enable him to become an engineer. He becomes a maistry. Unless there are inducements offered to the Indian to better his position, the right type of man won't come in. The educated man finds better opportunities probably in Civil engineering or law or medicine and he has gone there. He knows that the mechanical engineer or the structural engineer leads a precarious life. He may get a living to-day and he may not get it to-morrow. That is our position.

Mr. Mathias.—The orders you get are generally for works which are required in a hurry.

Mr. Hefferan.—Oftener than not.

Mr. Mathias.—Could you give us any idea as to what proportion of your orders are works to be executed very quickly?

Mr. Hefferan.—It would be very difficult to say.

Mr. Mathias.—You say oftener than not. Could you say 70 per cent.

Mr. Hefferan.—We would make an effort.

Mr. Mathias.—Would you mind getting that for us?

Mr. Hefferan.—We can get it next week.

Mr. Mathias.—Of course on these works your prices are not regulated by competition.

Mr. Hefferan.—Just the same regulation.

Mr. Mathias.—You get only internal competition.

Mr. Hefferan.—Yes.

Mr. Mathias.—You are not affected by imports from abroad.

Mr. Hefferan.—No, it is internal competition which practically is the same so far as we are concerned.

Mr. Mathias.—Can you give us any idea of the amount of work which you have lost by competition from abroad?

Mr. Hefferan.—That is very difficult to say. We are never told whether the work has been placed abroad or not. A great many enquiries are made. They don't always result in orders. Suppose a man wants to make up a scheme. He wants prices. The easiest way of getting prices is to send out enquiries.

Mr. Mathias.—Supposing further protection was introduced, is it your idea to extend your factories and go in for production on a large scale?

Mr. Hefferan.—We shall in the near future have to remove our Howrah works. The bridge is going to interfere with them and these works will also be transferred to Dum Dum. We have got about 30 odd bighas of land at Howrah and at Dum Dum 170 bighas, so that the question of land is not going to trouble us any more. It will just depend upon the amount of work that is available whether we extend or we don't extend. It is not possible for any one firm to make a lot of money. As soon as people see that we are making money, they will want to participate. There will be competition. If the work in India were doubled to-day we should have any number of works springing up wanting to produce all sorts of things.

Mr. Mathias.—So that it is really the size of the home market which is the determining factor.

Mr. Hefferan.—That will control entirely the size of all or any other works.

Mr. Mathias.—The question therefore is to what extent the market available for existing engineering works has been limited by the placing of orders abroad.

Mr. Hefferan.—Yes.

Dr. Matthai.—In that connection do you know the statement that you gave us in the first enquiry. Please look at page 438 of 1924 evidence volume II. There you divide your total output into 4 classes:—

Wagon works.

Structural works, Jamshedpur.

Mechanical works, Howrah.

and give your output for each year since 1912-13 and your present average capacity. Could you bring that statement up to date?

Mr. Hefferan.—Yes.

Dr. Matthai.—Up to 1925-26.

Mr. Hefferan.—Figures won't be available for 1925-26. We shall have to stop at 1924-25. These figures are from October to October.

Dr. Matthai.—There might be difficulty on account of the re-organisation of the works.

Mr. Hefferan.—We shall get that quite readily.

Dr. Matthai.—In the same form as this.

Mr. Hefferan.—Yes. Our conception of the Tariff Board is that they are out at the cheapest price to the country to enable the industry to stand on its feet. There appears to be an impression abroad if you give us a high tariff we shall revel in high prices. That is a mistake. We can't do that. A dozen or more firms in India are not going to be dictated to by one or two firms. They will always struggle to get orders. There is not enough work placed in India to fill our shops.

Mr. Mather.—That may be your trouble. It may be that you are not getting sufficient orders to keep your works fully employed because a bigger proportion is going to other firms in India.

Mr. Hefferan.—Other firms are no better off than we are.

Mr. Mather.—Because you are competing too much against one another.

Mr. Hefferan.—You will do no harm by putting up a tariff if we are competing so low and cutting each other's throat. The tariff will not do any harm to anybody in that case. It will be just a dead letter. In case somebody wants to dump, it will apply; otherwise we will be cutting each other's throat and doing the work cheaply.

Mr. Mather.—You suggest that you will continue to cut each other's throat.

Mr. Hefferan.—How can you prevent it? Nobody is going to allow someone to get in front of him.

Dr. Matthai.—However high the duty is?

Mr. Hefferan.—You will improve the industry.

Dr. Matthai.—How would you?

Mr. Hefferan.—It is a question of the survival of the fittest.

Dr. Matthai.—The position is that less business is going in the country now than some years ago and it must react on the industry. There are far too many works trying to do engineering.

Mr. Hefferan.—While things worth many lakhs of rupees are being imported?

Dr. Matthai.—The import is steadily coming down.

Mr. Hefferan.—Let it vanish.

Dr. Matthai.—It is steadily coming down without protection.

Mr. Hefferan.—We have a certain amount of protection.

Dr. Matthai.—It has nothing to do with protection. You have got a great advantage in the matter of freight. The freight on fabricated steel is higher than the freight on rolled steel.

Mr. Hefferan.—The difference between the two will be about a pound (sterling) per ton.

President.—You calculate the cost of the British manufacturer in a rather peculiar way. You take his cost of materials at the same figure as yours, *viz.*, Rs. 110. How do you make that out?

Mr. Hefferan.—We only assume. We do not know what he actually pays. How can we tell what he does pay?

President.—When you take your price as Rs. 100, it includes a certain amount of duty, does it not?

Mr. Hefferan.—Yes.

President.—He does not pay any duty in England.

Mr. Hefferan.—No.

President.—You must take the actual price of his material there and then you must add his conversion cost if you have got it and the freight.

Mr. Hefferan.—That is what we have done. The price here is Rs. 110 and we put in Rs. 33 duty. It comes to Rs. 143. To the British manufacturer it is Rs. 110.

Mr. Mather.—How do you know that it is not less than Rs. 110?

Mr. Hefferan.—Because that is the price they quote us.

Mr. Mather.—Who quotes?

Mr. Hefferan.—The Britishers quote that price for the imported stuff.

President.—You take his price as if he fabricated his steel in India.

Mr. Hefferan.—No.

President.—You see the difference between Rs. 176 and Rs. 253 is the amount of protection that you claim. Is it not so?

Mr. Hefferan.—Yes.

President.—Therefore you take the price of his material as if he fabricated it in India.

Mr. Hefferan.—In the case of light spans or normal spans, there is hardly any difference between the ordinary steel and fabricated steel in freight. The cost of the material is Rs. 143 per ton.

President.—That is including the duty.

Mr. Hefferan.—Yes.

President.—Would Rs. 110 include any duty?

Mr. Hefferan.—No, but then he pays 10 per cent. duty on fabricated steel.

Mr. Mather.—Your firm buys in European markets, partly for merchant purposes and partly for your own use, very considerable quantities of steel. You know the actual prices of steel in Europe and you know the kinds of steel required for structural work because you yourselves have a structural department. Could not you have made a direct calculation on the prices prevailing in Great Britain or on the Continent?

Mr. Hefferan.—This is based on that.

Mr. Mathias.—Rs. 110?

Mr. Hefferan.—Yes. At that time it was based on that.

Mr. Mathias.—Which time?

Mr. Hefferan.—At the time it was written, *i.e.*, this year.

President.—That is £7-10-0.

Mr Hefferan.—Yes.

Mr. Mathias.—Are you using English material or Tata's material?

Mr Hefferan.—Indiscriminately whichever is more convenient.

Mr. Mathias.—For your calculations you have assumed that the difference between the British material and Tata's material would be the amount of duty.

Mr. Hefferan.—Yes.

Mr. Mathias.—That is not so in practice.

Mr. Hefferan.—Oftener than not. About a week ago Tata's sent us a notice to the effect that they will reduce their price by Rs. 12 for 200 tons of structural material per month for the next three months.

Mr. Mathias.—Strictly speaking this calculation hardly represents facts, does it? Tata's price is below the price of British steel.

Mr. Hefferan.—Sometimes below and sometimes not.

President.—Would it not be better to take the f.o.b. price of British fabricated steel which you gave as £13-8-0 and get the f.o.b. price of British unfabricated material and then take the difference between the two as what you call the cost of conversion.

Mr. Hefferan.—I happen to have that here.

President.—What is the f.o.b. price of the fabricated material?

Mr. Hefferan.—£13-8-0. As regards the order for 53 spans of 94′ 6″, I have made up an average of the material. The material consists of ordinary sections, plates, rivets and paint. In the one case it comes to £7-14-0 per ton.

President.—You cannot do that. Your rivets are included in your conversion.

Mr. Hefferan.—Where?

President.—In the Indian cost that you have given. What you have got to take is the cost of the sections. In your Indian cost everything is included in Rs. 110. You must make the two comparable.

Dr. Matthai.—Have you got the figures for rivets, paint, etc.?

Mr. Hefferan.—Yes (handed in).

President.—Shall we take the f.o.b. price of the fabricated material?

Mr. Hefferan.—These are the details:—

	£	s.	d.
24 tons at £16-8-6 a ton c.i.f. Karachi . .	394	4	0
It is made up of 214 cwts. of sections at £6-7-0 a ton f.o.b.	66	18	11
226 cwts. of plates at £7-2-0 a ton . . .	80	4	7
40 cwts. of rivets at £12-2-9	24	5	6
On the total span paint was estimated at Rs. 160	12	0	0
TOTAL .	184	9	0
To convert £394-4-0 c.i.f. into f.o.b.			
Freight on 13½ tons of material at £3-10-0 per ton	47	5	0
Freight on 10½ tons of material at £2 per ton	21	0	0
TOTAL .	68	5	0
Less 5 per cent. rebate we got . . .	3	8	2
	64	16	9

Deduct £64-16-9 from £394-4-0.
It gives you £329-7-3.

	£	s.	d.
Subtract the f.o.b. price from	329	7	3
	184	9	0
Balance	144	18	3

That is for 24 tons. It gives you about £6 per ton.

President.—These figures are not comparable.

Mr. Hefferan.—No, none of them will be unless you get concrete examples in both cases.

President.—You have given £12 for paint and £24 for rivets.

Mr. Hefferan.—You must pay for the weight of the rivets.

President.—Does Rs. 110 include rivets?

Mr. Hefferan.—Yes. By waste we call the material that we don't get paid for. What is this wastage?

Mr Mather.—That is what you cut from the corners of plates, etc.

Mr. Hefferan.—That cannot come to 10 per cent.

Mr. Mather.—Would 5 per cent. be enough for that?

Mr. Hefferan.—Normally if we had time to get the material from the rolls, the wastage would not be more than 2½ per cent. and the loss would be the holes that we drilled out. We don't get paid for the shanks but we get paid for the heads.

Mr Mather.—I am not talking about rivets. Let us keep to beams, plates and sections. You buy them from Tata's or from home. If you want to make 100 tons of finished material, do you use 110 tons of beams, plates and sections?

Mr Hefferan.—Including shanks. We have got to provide shanks for nothing and that is provided in Rs. 110. Of course we get paid for the heads, so that this is really legitimate.

President.—If you are applying our principle, then this £12 for paint and £12 for rivets . . . . . .

Mr. Hefferan.—It is £24 for rivets. You will have to pay on the basis of the average of £6-7-0 and £7-2-0 *i.e.*, £6-15-0 on two tons. You can see that we get paid for the rivets. Heads we get paid for. All that we lose is the shank. In other words if you say that we have not lost the borings, then we have lost the price of the shanks. The heads are all included in the weight of the material. That is covered by 10 per cent.

President.—According to your figure the cost of fabrication is £144-18-3 as against the material £184-9-0. If you were to apply the same principle as we did before, you will have to deduct the cost of the rivets and the cost of the paint which is equal to £36.

Mr. Hefferan.—We get paid for the rivets.

President.—How much did you calculate?

Mr. Hefferan.—£24 for rivets and £12 for paint.

President.—According to that principle we shall have to deduct £36 from £184-9-0.

Mr. Hefferan.—According to you even the utmost that you want to deduct would be £5 a ton. The weight is there and we get paid for that weight. The customer puts it on the scale, the rivets are there and we get paid according to the weight.

Dr. Matthai.—Supposing you take the f.o.b. cost of rivets and instead of including it in the materials you include it in the cost of conversion.

Mr. Hefferan.—We cannot put that in the conversion, because sometimes one job requires 20 rivets to the cwt. and another job 2 rivets to the cwt.

Dr. Matthai.—Supposing you did, on that basis what figure would you get?

Mr. Hefferan.—You would not get any figure. In one instance you would have 40 rivets to the cwt. and in another 20 rivets to the cwt.

President.—We are not discussing who is right and who is wrong. We want to make the figures comparable. We might have been wrong in having included the rivets and the paint in the conversion cost.

Mr. Hefferan.—You could maintain that paint is part of the conversion cost but not the rivets.

Mr Mather.—What you have given us as the Indian cost consists of three items, materials *plus* wastage 10 per cent. duty on material 33 per cent. and conversion Rs. 110 you have just told us that this conversion of Rs. 110 is the figure that you have arrived at by an examination of your actual costs. In doing that did you include rivets as part of the conversion cost?

Mr. Hefferan.—No. These are purchased material.

Mr. Mather.—You have got rivets in your material *plus* 10 per cent. wastage which is Rs. 110. In that case if you are going to include rivets there then 10 per cent. wastage is excessive?

Mr. Hefferan.—But if the rivets are not put in there?

Mr. Mather.—You say it is put in. You don't lose anything anywhere on your rivets.

Mr. Hefferan.—We lose the shanks in the rivets.

Mr. Mather.—Even on that basis 10 per cent. wastage is probably excessive.

Mr. Hefferan.—No, including that.

Mr. Mather.—Then another point arises. If you are not going to do that then the duty ought not to be so high. There is no protective duty on rivets.

Mr. Hefferan.—No.

Mr. Mather.—So the allowance for the duty is excessive if you count the rivets among the material.

Mr. Hefferan.—We could split that up. That will probably make the duty 32 instead of 33 per cent.

President.—How much did you get as conversion cost?

Mr. Hefferan.—£6 roughly.

President.—There is one other point that I think you have complained of. You say that the British manufacturer will ordinarily get his material a few shillings cheaper.

Mr Hefferan.—That is our impression. When he places large orders with the steel manufacturer it is well known that he gets it cheaper. From my actual knowledge, of course we do not know definitely. We have done business with Messrs. Dorman Long for a great many years and we only once had more than a suspicion that they undersold to Braithwaites.

President.—Compared to those of these big works probably your requirements are small?

Mr. Hefferan.—Not with Messrs. Dorman Long. We also do a lot of merchant business with Dorman Longs apart from the structural work.

President.—Take your own case just now. On what basis did you get a reduction of Rs. 12 from Tatas?

Mr. Hefferan.—It is spontaneous.

President.—It is not spontaneous. Mr. Peterson told us that the complaint was that the British manufacturer of fabricated steel could get a concession from the British manufacturer of rolled steel which put him in a position of advantage over the Indian manufacturer of fabricated steel. Then the Tata Iron and Steel Company said that they would give you a concession of Rs. 12.

Mr. Hefferan.—We don't know how it came about. They would not extend it to wagons or underframes. I asked them definitely about that.

President.—Anyhow it is quite possible that he gets his material slightly cheaper than the market quotation.

Mr. Hefferan.—We have got that impression.

President.—Are not these figures comparable?

Mr. Hefferan.—To compare that figure with this is hardly fair.

President.—You gave us the figure of £13-8-0.

Mr. Hefferan.—That is for 60′ 0″ spans and £7-14-0 for the material, that is taking the actual waste. Labour cost is £5-14-0. Come down to a 40′ span and we will do that for less. Come down to an ordinary 10′ span and it would be less than £5.

Mr. Mather.—Just as you take £5 as a fair average for conversion cost for structural work in Great Britain, do you consider Rs. 110 as equally fair in India?

Mr. Hefferan.—Yes. As for labour, for every Pound that the Britisher has to pay for conversion it costs us Rs. 22.

Mr. Mather.—Do you expect that to be more or less permanent?

Mr. Hefferan.—No.

Mr. Mather.—Do you see any chance of reduction in that?

Mr. Hefferan.—Very considerable reductions. I have applied Rs. 22 to the Pound throughout in the calculations not only to structurals but to wagons.

Mr. Mather.—You say that your opinion is that it is costing you Rs. 22 to do in India what it costs one Pound in England. How do you expect to reduce that Rs. 22?

Mr. Hefferan.—There are two sources from which we expect a reduction—one is greater output per man.

Mr. Mather.—How do you expect to get that?

Mr. Hefferan.—The man will get more used to the work. They are getting used to the high-speed machinery we have now got in our works, for example new punching machines. The old punching machine worked at about 40 strokes per minute whereas the other is 90. As a matter of fact when the new machines first came we could get more work from the machine with 40 strokes than from the one with 90 for the simple reason of the speed. One machine came down deliberately and gave him plenty of time that suited him well. The other machine was going much faster and he missed. But he is just beginning to find out that if he sticks to it he can turn out more work with the new machine. It will take them some years to get used to it.

Mr. Mather.—Unless you can satisfy the Tariff Board and Government that there is some reasonable prospect of your costs in India going down, at any rate on your operation of producing fabricated steel, so as to be able ultimately to compete with the foreign article, you do not satisfy the condition laid down by the Fiscal Commission, and you have given nothing here to show that you can do that.

Mr. Hefferan.—There is a reduction of Rs. 7 a ton.

Mr. Mather.—At the same time there has been a much bigger reduction in England, so that you are no nearer; in fact you are further away from effecting it than you were three years ago on these figures.

Mr. Hefferan.—We are Rs. 2 a ton worse off. When exchange settles down and things come back to normal we shall go back much further than Britain can go back in wages. Our rates at the present time are very much higher than what the British workers are getting. It is bound to go back to the pre-war level.

Mr. Mathias.—The position then is that you are now about Rs. 6 worse off in fabrication charges than you were two years ago. The British manufacturer has reduced the charges by a sovereign and yours has fallen by Rs. 47 so that the present position is that far from improving you are deteriorating compared with firms in England at the rate of Rs. 6 under the present protection. Was that due to part time work or what?

Mr. Hefferan.—Shortage of work.

Mr. Mathias.—So that any protection based on these conversion charges you give here would probably be excessive?

Mr. Hefferan.—The protection, to our mind, ought to be excessive. Of course that does not follow that we are going to get this extra price. That is needed to keep the foreign competition out and prices in India will go down as a result of internal competition.

Mr. Mathias.—My point is this. If adequate protection is introduced then your conversion cost will not be anything like Rs. 110?

Mr. Hefferan.—It would go down.

Mr. Mathias.—Therefore the protection necessary for you is not protection based on the difference between British and Indian prices with the Indian price including conversion at Rs. 110.

Mr. Hefferan.—At the present time it is.

Mr. Mathias.—If protection is introduced then the protection will not be so much as this calculation of yours would indicate to be necessary?

Mr. Hefferan.—The object of protection is to combat any tendency to dumping or any tendency to charge a lower price for export than for home consumption. If Great Britain or Germany or any other country decides upon making a crusade against the manufactures of another country, sometimes supported by Government, sometimes supported by combines of their own, the object of protection is to combat it, and internal prices will then regulate our prices.

Dr. Matthai.—Can you tell me with regard to a thing like bridge-work how many engineering works there are in India more or less on the scale as you?

Mr. Hefferan.—I should say 12, all of which are skilled to do up to 60' girders. That would form the bulk of the orders placed in this country.

Mr. Mathias.—Can you tell me how your firm has been doing for the last two years? Is it a firm registered in India?

Mr. Hefferan.—We are a British firm.

Mr. Mathias.—Can you let us have your last two balance sheets?

Dr Matthai.—Make it three years.

Mr. Hefferan.—Two years I can give, that is October 1924 and October 1925. I may tell you that we have nothing to hide. We are prepared to be quite candid.

Dr. Matthai.—I want you to look again at page 432 of the Evidence during our first enquiry. At the end of that page you give a list of the various kinds of fabricated steel that you make—wagons and carts and road lorries are included in that. Leave those out for the moment. Can you tell me in respect of which of these you get regular orders and which of these would be occasional orders? For example, take the item "Pithead Frames." Orders come occasionally for these, do they not?

Mr. Hefferan.—Orders fluctuate, with the prosperity or otherwise of the coal trade. When the coal people prosper we get orders; when the business is dull, our business is dead.

Dr. Matthai.—Railway and road bridges would form the bulk of your work, would it not? With respect to that you might say in this country there is a sort of continuous demand?

Mr. Hefferan.—Yes. But as a matter of fact I think for the last year it would be Port Commissioners Sheds. It was 34 lakhs of rupees for four sheds and they loom the largest of any single order.

Dr. Matthai.—What about roof trusses and columns?

Mr. Hefferan.—Roof trusses and columns would be included in the material for that order.

Dr. Matthai.—With regard to roof trusses and columns do you get continuous orders in the way in which you do for railway and road bridges or do you get only occasional orders?

Mr. Hefferan.—They fluctuate.

Dr. Matthai.—There is more fluctuation with regard to that then with regard to bridges?

Mr. Hefferan.—No.

Dr. Matthai.—Then take Tea Houses. What about that?

Mr. Hefferan.—We are not getting many orders for these now. People are specializing in things like that, people like Main and Company. We do but not often.

Dr. Matthai.—Can you tell me generally with regard to these various items, in respect of which of these you are likely to come into competition

with British firms effectively? There are some of these things which they might not care to supply.

Mr. Hefferan.—They would like to supply all the needs of India as they did in the past!

Dr. Matthai.—I had got a different impression. Would it be too much if I ask you to take this list given on pp. 432 and 433 and give me the amount that was purchased under each heading for three years, 1923-24, 1924-25, and 1925-26?

Mr. Hefferan.—Yes.

Mr. Mathias.—Can you tell me whether the fabricated steel requirements of this country can all be met by the Indian engineering firms, that is to say, are they able to produce all the requirements of the country?

Mr. Hefferan.—All the normal requirements. By normal requirements, I mean road bridges, rail bridges up to 200 ft. When it comes to a thing like the Hughly Bridge, for instance, where probably there would be a span of 500 ft., I don't think any Indian firm would tackle it.

Mr. Mathias.—You could not give me any idea in percentages of the amount of work. Do you consider that the normal amount of work would come to 80 per cent. of the total?

Mr. Hefferan.—Yes.

Mr. Mathias.—You would agree that perhaps 20 per cent. of the total fabricated steel would in any case have to be imported from abroad.

Mr. Hefferan.—Yes, just immediately before we can stand on our own feet, Government could only get 20 per cent. of the revenue from tariffs on structural works that might be got if we were not working at all.

Wagons.

President.—As regards wagons first of all will you please give us a list of the orders that you have received for 1924-25, 1925-26 and 1926-27. I suppose for 1926-27 you have not got any orders.

Mr. Hefferan.—Yes. We have nothing for wagons for 1926-27, but I think we have for underframes.

President.—Give us information for both wagons and underframes for that period. Give the type of the wagon or the underframe as the case may be, the price that you get and the amount of the bounty.

Mr. Hefferan.—I only know the last bounty.

President.—That is for the underframe.

Mr. Hefferan.—I don't know whether there is any bounty on the underframe or not. We have got a record of the bounty.

President.—What is the type of wagon that you get?

Mr. Hefferan.—We get A-2 but we are now making A-1 and A-2 wagons. The bounty on A-1 is Rs. 402 and A-2 Rs. 379.

President.—That is for 1926-27.

Mr. Hefferan.—That is for 1925-26. We are doing 351 wagons at Jamshedpur and 143 at Garden Reach.

Mr. Mather.—You have just told us that you didn't get an order for 1926-27.

Mr. Hefferan.—I made a mistake. We have got an order for 1926-27.

President.—You make A-1 and A-2.

Mr. Hefferan.—Yes.

President.—What is the amount of the bounty?

Mr. Hefferan.—Rs. 402 for A-1 and Rs. 379 for A-2.

President.—Is that for 1925-26?

Mr. Hefferan.—Our year and your year are different.

President.—When did you get the order?

Mr. Hefferan.—These have to be delivered by March 1927.

President.—Give the date of the order, date of delivery, rate and amount of bounty.

Mr. Hefferan.—Yes. We have an order for underframes for the Great Indian Peninsula Railway.

President.—Did you get the price that you quoted?

Mr. Hefferan.—Yes. I don't know whether there is any bounty attached to it.

President.—You can say that you don't know, if you don't know.

Mr. Hefferan.—Yes. We have got previous to this. We did some wagons in 1924-25, but I don't know the amount of bounty.

President.—So far as A-2 is concerned, if you see paragraph 81, page 56 of the Railway Administration Report you will find the amount of the bounty they have paid. Do you recollect what your order was for A-2?

Mr. Hefferan.—345 or so.

President.—They mention the amount of the bounty they paid.

Mr. Hefferan.—Rs. 475. This year we are getting Rs. 379. We are down by nearly Rs. 100.

President.—Do you know what Messrs. Burn and Company got?

Mr. Hefferan.—They did tell me. They got Rs. 276 for A-2.

President.—You are fortunate in having got more than they.

Mr. Hefferan.—I suppose we are.

President.—What is your complaint? The bounty scheme has worked only for two years and you know the figures.

Mr. Hefferan.—The Railway Board would not give it to us.

President.—The Railway Board have given it here.

Mr. Hefferan.—When we got this order they didn't tell us what bounty we would be getting. They said it was sufficient to know that we would be getting some bounty.

President.—Don't you read their reports?

Mr. Hefferan.—That is 2 years afterwards.

President.—What is the reason for which you want to know what the bounty is?

Mr. Hefferan.—We want to know by how much the other people beat us.

President.—The f.o.b. price is published.

Mr. Hefferan.—Yes.

President.—Don't you know how to work out the remaining figures.

Mr. Hefferan.—We don't know their methods. We don't know the rates they apply.

President.—From time to time they are given in our reports. From 1923 there are figures given.

Mr. Hefferan.—You cannot reconcile these with bounties.

President.—What was the price that you got?

Mr. Hefferan.—Take the A-1 wagon.

President.—Take the A-2 wagon.

Mr. Hefferan.—The lowest British tender is £182.

President.—Which year you are talking about?

Mr. Hefferan.—The last wagon order they placed. It is not in the book.

Mr. Mather.—Placed in November for delivery this financial year?

President.—On that what bounty did you get?

Mr. Hefferan.—Rs. 379. The lowest British tender is £182. Along with that it says if you give us the whole of this order, we will reduce it to 25,000.

President.—And they give the number of wagons, don't they?

Mr. Hefferan.—The Metropolitan people give. They only got a portion of the order. How much remission they make and how much do they allow for erection and putting on rails. It is easy for them to tell us. They simply write and say that it is sufficient for us to know that we get a bounty.

President.—There is this to be said from their point of view. If you know exactly everything—you are only three or four manufacturers—you may combine in such and such a way.

Mr. Hefferan.—That was with reference to the last tender. We don't know what the Britisher or anybody else is going to quote next time. Nobody can say. They may be down by £10 or they may be up by £10, we cannot say. As regards this price if the Railway Board were fair to us, they would say "we will give you an average of the three lowest or an average of the 3 lowest British and 3 lowest foreign." After receiving 50 tenders they take the lowest. It is not fair for a struggling industry to be treated like that. The highest foreign tender is £335 and the lowest foreign is £190.

President.—Where did you get this information from?

Mr. Hefferan.—From the Trades Journal of 4th February. The lowest British is £182 the highest British £235. Lowest foreign tender—£190. Highest foreign tender—£335.

President.—What about the lowest Indian?

Mr. Hefferan.—Rs. 3,573.

President.—Is that for A-1?

Mr. Hefferan.—A-2. Rs. 3,470 is Burn's.

President.—What is yours?

Mr. Hefferan.—Rs. 3,573.

President.—That is why they got a smaller bounty.

Mr. Hefferan.—They got Rs. 103 less than our bounty. They got Rs. 276.

President.—Your complaint is that from these figures you don't know what the real price of the British wagon.

Mr. Hefferan.—We could work out the price of the British wagon, but we don't know what the Railway Board assume it to be.

President.—What did you assume it to be?

Mr. Hefferan.—We have got all that tabulated. I can bring it and show it to you.

President.—It is better to have your calculations.

Dr. Matthai.—What makes it difficult? Is it mainly exchange and erection charges.

Mr. Hefferan.—There is £182. We don't know how much of that is erection charges. The Metropolitan people said that they would make a lump reduction.

Dr. Matthai.—Leave alone lump reduction. Supposing there was no lump reduction, you would get £182 f.o.b. and then what makes it difficult to arrive at your price would be—

(1) the rate of exchange at which conversion would be made and

(2) the erection charges.

Mr. Hefferan.—The Railway Board have taken the rate of exchange at 1*s.* 6 $\frac{5}{32}$ *d.*

Dr. Matthai.—There is only the erection charge which is uncertain.

Mr. Hefferan.—Yes, their idea of freight and insurance.

Dr. Matthai.—What is it really that you want apart from the amount of the bounty. Do you want to know precisely the rate of bounty that you

would get at the time that you send up your tender or at the time you get the order?

Mr. Hefferan.—After we have got our order. There are three or four firms all scrambling to get certain orders. We put in our lowest price and up to then we don't care what the price is going to be.

Dr. Matthai.—When you send up your quotation you have got to form some kind of idea as to what the amount of bounty might be.

Mr. Hefferan.—We all struggle and give the lowest price.

Dr. Matthai.—Lowest price representing what?

Mr. Hefferan.—The lowest price that we can exist on.

Dr. Matthai.—What do you mean by 'exist on'?

Mr. Hefferan.—Keep out of the insolvency court.

Dr. Matthai.—Do you mean all except profit?

Mr. Hefferan.—Sometimes we sacrifice profit as we did here. We cannot look for profit every time.

Dr. Matthai.—So that after sacrificing profit you try to get your charges and direct costs.

Mr. Hefferan.—Yes, to keep our men together.

Dr. Matthai.—Sometimes you do take profit also into account.

Mr. Hefferan.—If there is a possibility, we do, but it is a long time since we have been able to include any profit. You will find out from the two reports that I have given you how thin the profits were. There was considerable loss the year before.

President.—That was for all the engineering. Do you keep separate accounts for wagons?

Mr. Hefferan.—According to the figures we have given you we can show you separate accounts for each department.

President.—Your balance sheet would not show that.

Mr. Hefferan.—We could not give you audited figures. The balance sheet contains audited figures. But we can give you absolute separate revenue statements showing what each department has made.

President.—We would like to see what this particular department is doing.

Mr. Hefferan.—I have no objection to show you, but of course that is in confidence. We are a British company and we don't publish our accounts.

President.—If we cannot make use of the information, it is no good. We don't want to know for the sake of knowing.

Mr. Hefferan.—If you have the information before you, it will assist you in arriving at conclusions.

President.—If we cannot make use of that information in our report, it is as good as not having it.

Mr. Hefferan.—Our company is a limited company but a private limited company. We file our accounts and don't publish them.

President.—It may be to your advantage to show that you had lost money over this business. If you don't give us figures which we can make use of, they are no good.

Mr. Hefferan.—I will cable London and ascertain from them whether they have any objection to your using these figures.

President.—You can give us your balance sheet for your engineering and also the revenue statement for the wagon department, and then you can cable to London. If your Directors say that we cannot use this information, we shall treat it as confidential and return the papers to you. But I may tell you that if we can make use of it, it will be a very important point.

Mr. Hefferan.—I will put it to our Directors that it is important that you should have permission to use the figures.

President.—At present the natural impression that anybody would gather from the way in which you have accepted these prices and from the fact that you are still going on is that you might be making a good bit out of it.

Mr. Hefferan.—The public do not know how patient and long suffering we have been.

President.—As regards the comparison of costs that you give on page 257 of the blue book recently published, you say it could not have been fair because the exchange was taken at 1*s.* 6 $\frac{5}{32}$ *d.* to the rupee. It has got nothing to do with wagons.

Mr. Hefferan.—It is all imports. I don't think it is specified wagons.

President.—It is no use making a statement which has no direct application to the wagons.

Mr. Hefferan.—Have you got the correct wording?

President.—It looks as if it has something to do with wagons.

Mr. Hefferan.—This is what is said in the Indian Trade Journal of December 17th, 1925:—"For some time the Government of India have had under consideration the question of the rate of exchange to be adopted in converting quotations in sterling into Indian currency for the purpose of comparing prices in accordance with the provisions of rule 8 of the revised Rules for the supply of articles for the public service." That I take it includes wagons as any other.

President.—Unless you can show that in the case of wagons they took 1*s.* 6 $\frac{5}{32}$*d.* you cannot say that a fair comparison was not made.

Mr. Hefferan.—See page 198 of the Indian Trade Journal of February 4, 1926, Note 2:—"The rate of exchange adopted for purposes of comparison of British quotations with those quoted by Indian firms was 1*s.* 6 $\frac{5}{16}$*d.* to the rupee which was the rate on the 10th November, 1925." When they compared at 1*s.* 6 $\frac{5}{32}$*d.* to the rupee, it inflated the bounty. The bounty should have been less by Rs. 22. When it goes on so many wagons, the railways are getting off cheap.

Mr. Mathias.—You think that it should be a charge on Railways and not on the General Revenues?

Mr. Hefferan.—Yes. We are told that we are getting a bounty of Rs. 357.

Mr. Mathias.—That is the rate decided by Government?

Mr. Hefferan.—Yes.

Dr. Matthai.—The benefit of the difference goes to the Railways.

Mr. Hefferan.—Yes.

President.—I want to make some attempt to estimate your costs. First of all, we want the exact costs of your materials for an A-1 wagon. You have given Tata material. Is that the only material that you have used of rolled sections or have you imported any?

Mr. Hefferan.—You have got a list of that.

President.—I wish to explain to you how I propose to deal with your costs. In your case we have not got the kind of costs that we ordinarily require. In Appendix 3 you have given some costs with which I shall deal in detail but I just want to explain the principle on which I propose to work. There you have got the cost of material and you put the cost of material and productive labour together. What I want to do is to take the cost of materials and then what you call your labour separately. As regards the other charges, in these you have included certain items which I would like to delete. I propose then to work out the percentage of labour to the other material and see how it works. I want to apply that percentage to a single wagon of A-1 type. For that reason it is not necessary for you to give exact figures. On page 255 you have given that. Unless these are your complete materials which you get from Tata's you must tell us exactly what you import. Is it the A-1 type or A-2 type that you get?

Mr. Hefferan.—We have had more A-2 than A-1.

President.—Take the A-2 type and give us your total quantity of material in the form given at page 420. Of course the wheels and axles that the railways supply you should omit.

Mr. Hefferan.—Yes.

President.—If you turn to your appendix 3 you will find that this comes down from 1921-22. I want to cut out 1921-22 and take 1923-24 and 1924-25.

Mr. Hefferan.—We will have to assume the figures in that case; we won't be able to give you the actuals.

President.—In this case you don't assume anything, do you?

Mr. Hefferan.—No. We have put all the figures in.

Mr. Mather.—It was only in 1919 that you began building wagons?

Mr. Hefferan.—Yes, after the war?

Mr. Mather.—You go as far as issues from stock. What is the credit that you show there?

Mr. Hefferan.—Return of stock.

Mr. Mather.—What is this 'out door'?

Mr. Hefferan.—We have got one form for getting out all our costs. That out door is for work that we do outside, erection and things of that sort. That should be crossed out.

Mr. Mather.—Cost above material is Rs. 58,58,049 but here you have not got the corresponding labour figures. How are we to get the percentage?

President.—We cannot really find out what your costs are.

Mr. Hefferan.—There is another sheet showing the expenditure on wagons. That is year by year, material and labour without overhead. They lap over so badly that we cannot chop off and say where the expenditure began.

President.—The only thing we can get is the cost of material.

Mr. Hefferan.—And the cost of labour. You get trade expenses from this sheet.

President.—What it comes to is this. Of the total expenditure of Rs. 72,43,714 you say Rs. 58,58,049 was for material and direct labour and the balance Rs. 13,85,665 is for overhead.

Mr. Hefferan.—That is correct.

President.—But in these 'Other charges' that we call overhead you have included depreciation. On what have you calculated it?

Mr. Hefferan.—5 per cent. on machinery and buildings on replacement value.

President.—That is your depreciation?

Mr. Hefferan.—Yes.

President.—No wonder it is so small.

Mr. Hefferan.—Yes. That is all written down.

Dr. Matthai.—Three times the depreciation you spent on repairs?

Mr. Hefferan.—Yes. Of course the depreciation is negligible. The income tax people agreed to give us 5 per cent. on machinery and 5 per cent. on buildings on the total value. We have replace values in our stock book and they give us that. After it is written off we don't go in for depreciation. It remains without depreciation for the rest of time until it is scrapped. Once we come down to zero they don't allow any more depreciation and it stands in our books with no more depreciation after that.

Dr. Matthai.—What can you expect at zero?

Mr. Hefferan.—It is earning money.

President.—We will take 23½ per cent. that you give and see how it works out. You have given us the cost of your A-1 wagon. First take the materials. You say that the duty on forging material comes to Rs. 40 a ton. How?

Mr. Hefferan.—That is bars. Merchant bar is Rs. 40 a ton.

President.—Then labour you say is Rs. 154 a ton.

Mr. Hefferan.—That is what it comes to from our books.

President.—Apply this 23½ per cent. What is the percentage of labour?

Mr. Hefferan.—That is based on the price we pay to our contractors for fabricating the underframe.

Dr. Matthai.—This is direct labour?

Mr. Hefferan.—Yes. The percentage for that is included in the trade expense. There are two methods of assessing the trade expense, one is on material and labour combined which we find from this. There is no dispute about it. These are our trade expenses on the amount of materials purchased and the amount of labour paid: that is a simple calculation. But you cannot go by that. We have an arbitrary method of allocating a certain amount on material and a certain amount on labour, but nobody can check that. There is a certain amount of material bought and a certain amount spent on labour. Against that we spend a certain amount of money on overhead. We take one against the other and we get 23½ per cent.

President.—To what figure are we to apply this 23½ per cent. in this?

Mr. Hefferan.—You will have to take Rs. 933 and Rs. 1,266, that is a total of Rs. 2,199. Against that you have got Rs. 650 for labour.

President.—How do you get that Rs. 650?

Mr. Hefferan.—That is what we pay the men. You have Rs. 2,199-8-0 and Rs. 650, a total of Rs. 2,849-8-0. These two figures we get from our books. That is what we pay for material and labour. Suppose we applied 23½ per cent. to that, it comes to Rs. 3,479, or showing a profit of Rs. 200 it comes to Rs. 3,679.

President.—Do you mean to say that this Rs. 650 is really what you pay the contractor?

Mr. Hefferan.—Yes.

Dr. Matthai.—You get the actual data for direct labour and material and from that you get definite figures?

Mr. Hefferan.—Yes, from our actual disbursements. This is an arbitrary method. 5 per cent. on trade expense on material and 80 per cent. on labour, works out to 23½ per cent. on the total material and labour.

Dr. Matthai.—Supposing on each order you applied this method of 5 per cent. and 80 per cent. the result would be 23½ per cent. on each order?

Mr. Hefferan.—Practically yes; within a few rupees it will come like that.

President.—How do you get this figure of Rs. 154 a ton?

Mr. Hefferan.—That is an arbitrary figure. We pay a certain amount, that includes trade expense.

President.—Erection you have taken as Rs. 325 lump sum in your case?

Mr. Mather.—This is not necessarily your actual, it is an average?

President.—On page 257 you have given the total labour as Rs. 1,477·8. I take it that is really the addition of all items to the cost of material on this side.

Mr. Hefferan.—On the other side we have given Rs. 110 for trade expenses on material, Rs. 650 for labour and Rs. 520 for trade expenses on labour which make a total of Rs. 1,280. These are all arbitrary figures which we found from experience. We can't prove to you why we do it. We do it because it turns out to be like that. If somebody comes along they would apply other figures. 23½ per cent. is the actual figure as it stands on our books.

Mr. Mather.—So that the actual cost of Rs. 3,479 on page 256 is more nearly an actual figure than Rs. 3,677 on the other side.

Mr. Hefferan.—Yes. If you look at the figures under materials, trade

Mr. Mather.—It is a peculiar method to include profit in the total cost. You put profit under labour.

Mr. Hefferan.—Yes. If you look at the figures under materials, trade expenses are added.

Dr. Matthai.—Generally when you speak of trade expenses do you include profit?

Mr. Hefferan.—No.

Dr. Matthai.—It is only charges.

Mr. Hefferan.—Yes.

President.—Surely there must be more material than is shown here.

Mr. Hefferan.—Rs. 2,190.

President.—I am talking in tons now. The total comes to 6·2 tons. The cost of fabrication on that leaving out profits is Rs. 1,277.

Mr. Hefferan.—Rs. 1,170 labour and trade expenses.

President.—I am trying to find out at how much per ton it works out. Rs. 1,477·8 that you have given there includes Rs. 200 profit.

Mr. Hefferan.—Yes.

President.—If you exclude the profit of Rs. 200, the cost of fabrication is Rs. 1,277·8.

Mr. Hefferan.—It comes to Rs. 1,152.

President.—Take Rs. 1,280. That does not include profit.

Mr. Hefferan.—No.

President.—You spend Rs. 1,280 to fabricate 6·2 tons.

Mr. Hefferan.—About Rs. 11 a cwt. to build a wagon.

Mr. Mather.—That makes over Rs. 200 a ton.

Mr. Hefferan.—Yes, look at the amount of forgings you have got to do. You don't see the forgings, because they are all underneath.

President.—It does seem to me a lot at first sight.

Mr. Hefferan.—There are about 200 items of forgings in a wagon. We can show you a list.

President.—We have already got a list.

President.—Your own men forge all your forgings.

Mr. Hefferan.—If we don't, we have got to pay for them.

President.—Is it cheaper for you to import your forgings than to forge them yourself.

Mr. Hefferan.—We are forging now. As soon as we get to Dum Dum, we will forge again.

Dr. Matthai.—Practically all forgings.

Mr. Hefferan.—Yes, excepting Continental.

Mr. Mathias.—Do you find it cheaper to forge yourself than to import British forgings?

Mr. Hefferan.—For sale we import them. When we are making wagons, we make the forgings. It gives no return, but it pays a lot of overhead.

Mr. Mathias.—It carries a lot of overhead?

Mr. Hefferan.—Yes, that is how we score. If we import, the overhead would still be there.

President.—What is the difference between British and Continental forgings?

Mr. Hefferan.—Anything from £2 to £10 a ton.

President.—Can you give us the c.i.f. prices of British and Continental forgings for 1925-26?

Mr. Hefferan.—Yes.

President.—You say you always get the c.i.f. price.

Mr. Hefferan.—Yes.

President.—You indent through your own firm and they send you the c.i.f. price.

Mr. Hefferan.—They send us the original quotations. When we get an enquiry, we sent it home and tell our London Office to make enquiries and

cable us at the last moment, so that the price may not alter. They work out the cost and send us the c.i.f. price based on the lastest makers' quotation.

President.—You had better give us the c.i.f. price of forgings.

Mr. Hefferan.—Yes.

President.—Take a few typical forgings.

Mr. Hefferan.—Yes. Drawbar hooks British will win. We can't make brake beams and screw couplings. We can't look at the British price. If we ever get to being able to build wagons competitively with other people, we shall have to have subsidiary works all over the place who make a speciality of doing these. They have no trade expenses; they have no technical staff, they go in for forgings only and are the equivalent practically of great number of works in England who do nothing else but forgings.

Mr. Mathias.—Why are they less expensive?

Mr. Hefferan.—They havn't got to employ expensive experts who are highly theoretically trained men to make designs, etc. Before wagons can be made competitively in India, we should have firms in India doing forgings. Take the case of Angus people. They don't have to employ a highly trained technical staff.

Mr. Mather.—I don't think they would agree to that.

Mr. Hefferan.—They will have to go one step lower down—Angus do a lot of various other things—they will bring down the price—the same as the British.

President.—You get them from the Continent.

Mr. Hefferan.—Britain or the Continent—We don't get our prices for these forgings from wagon builders. Even in Great Britain many of the wagon builders get their small fittings from small shops all over the country.

Mr. Mathias.—It would mean a small firm or individual specialising in forgings. Will he be able to do so at competitive prices?

Mr. Hefferan.—He will beat everybody. He has got no big overhead. He sits down and looks after the orders. He finds the material and pays his workmen. He does not require any technical staff.

President.—Are you speaking from any personal experience?

Mr. Hefferan.—The people we buy from are not big wagon builders.

Mr. Mathias.—Whom do you buy them from?

Mr. Hefferan.—Small people. They are not regular wagon builders like the Metropolitan.

Dr. Matthai.—When they specialise their forgings would have to bear all their overhead.

Mr. Hefferan.—What would be the overhead? It costs us about 7½ per cent. for a technical staff at Clive Street, and also at the works. Then, we have got a big correspondence department, advertising and travelling to sell our stuff.

President.—Is it your point that the forgings should not be manufactured?

Mr. Hefferan.—They will be manufactured.

President.—They will be expensive from what you say.

Mr. Hefferan.—No. We will get people to go on making these forgings and nothing else. They will make these forgings and supply us. The wagon builder as a rule does not make these in any part of the world. He buys a lot of stuff from outside.

Mr. Mathias.—Your contention is that these forgings require very little or no protection.

Mr. Hefferan.—You made it necessary by giving steel Rs. 40 per ton.

Mr. Mathias.—Supposing we compensated you, then you would require no further protection.

Mr. Hefferan.—No, not after 5 or 10 years.

Mr. Mathias.—As soon as you got to that stage, you would require no protection.

Mr. Hefferan.—As soon as you place orders in India, you will find people doing that just as cheaply as in England. But you will have to give them compensating protection if you protect steel.

Mr. Mather.—You would expect then if the wagon builders in India did not attempt to make the forgings themselves but pooled all their orders and placed them with one maker in India, that one maker would be able to make them at the same price as that of the imported article.

Mr. Hefferan.—Not to-day.

Mr. Mather.—Under those conditions?

Mr. Hefferan.—Yes. From the 1st of January to 31st of December he will be doing only forgings. He will have no expense. He won't have to go round the country.

Mr. Mather.—Assuming that you were given protection, would you advocate the policy of buying your forgings in India?

Mr. Hefferan.—Buy them all in India?

Mr. Mather.—You would not attempt to make them in India yourselves?

Mr. Hefferan.—Not if we had a particular source of supply like that.

Dr. Matthai.—Would that apply also to castings?

Mr. Hefferan.—To everything including casting if we could get steel casting here at a price that we could import at! The present steel foundry cannot do it. They have got an electric furnace which is not intended to do this sort of thing. This electric furnace is intended to make high class alloy steel.

Dr. Matthai.—Supposing the wagon industry developes, forgings and castings may be left to take care of themselves.

Mr. Hefferan.—Everything would take care of itself. The Wagon Industry would take care of itself provided you don't make it impossible by giving the Steel Company a tariff and leaving us out. If we were able to go for a few years and if the steel tariff was taken off, we would be able to compete with anybody that came along.

President.—The Indian Standard Wagons Company practically make all their forgings. Messrs. Burn and Company, Limited, do more or less the same.

Mr. Hefferan.—Yes, because they never had the facility of cheap supply.

President.—Do you mean to say that they will then scrap their plant for forgings and go out to the market and buy them.

Mr. Hefferan.—Why not?

President.—They have got the plant.

Mr. Hefferan.—The idea is to encourage not only the wagon industry but also the forging industry independently. There is almost as much money spent in these forgings outside the wagon industry as is spent in the wagon industry. There are lakhs of rupees worth of forgings bought and used in the country.

President.—For what?

Mr. Hefferan.—For wagon repairs and things of that sort by railways. Orders for lakhs of rupees are going home for the simple reason that steel bears a tariff of Rs. 40 a ton and the forgings only 10 per cent.

Mr. Mather.—The latter comes to more rupees per ton in some cases.

Mr. Hefferan.—Yes, in some cases like drawbar hooks. Whichever way you look at it, it is the same story that we are telling all the time. We might have told it only differently.

Dr. Matthai.—Please look at Appendix 3. Can you tell me in each of these periods for which you have given figures how much finished work is represented in each of these columns leaving alone work in progress.

Mr. Hefferan.—I can give you the figure.

Dr. Matthai.—Where do you include your charge on working capital?

Mr. Hefferan.—We make no charge on working capital, because that is part of our profit. Our capital consists of ordinary and preference shares.

Dr. Matthai.—In your ordinary engineering department, you apply different proportions, don't you?

Mr. Hefferan.—Yes.

Dr. Matthai.—You apply 10 per cent. on material and 250 per cent. on labour.

Mr. Hefferan.—That is for structural.

Dr. Matthai.—That is what I am thinking of. That is borne out by actual experience.

Mr. Hefferan.—Yes. That figure substantiates what we have done here.

Dr. Matthai.—How do you account for the difference between structural engineering and wagons in the way in which you calculate your cost. In the structural engineering labour to a large extent would be the dominating factor.

Mr. Hefferan.—Yes.

Dr. Matthai.—That is not so in wagons.

Mr. Hefferan.—No, because it is more expensive material. Axle-boxes, springs, vacuum brakes, all these bear big prices. We only want 5 per cent. We don't require 10 per cent. on that. Labour here is a different class of labour that we employ. The other is more expensive labour.

Mr. Mathias.—Are you working full time in the construction of wagons?

Mr. Hefferan.—No. At the present time we are hung up more or less not for lack of orders but for the coal strike which kept back axle-boxes and vacuum brakes.

Mr. Mathias.—Apart from that, are you working full time.

Mr. Hefferan.—We would be. For the next three or four months we have enough work to carry us on at Garden Reach and we have enough work for six months at Jamshedpur.

Mr. Mathias.—These costs are based on the assumption that you are working full time.

Mr. Hefferan.—Yes.

Mr. Mathias.—Can we take it that the ratio between the costs above material for British wagons and local wagons is approximately the same as that between the costs above materials for British fabricated steel and local fabricated steel.

Mr. Hefferan.—No. This fabricating material is more expensive.

Mr. Mathias.—So that the ratio between Rs. 1,089 and Rs. 1,478 is a smaller than the overhead costs of fabricating British steel would be to the overhead cost of local steel. Is that right?

Mr. Hefferan.—At the present time it is Rs. 22 to £1. For every pound spent in Britain we have to spend Rs. 22 here.

President.—So far as your costs are concerned we really have to try and understand how far we can be guided by these figures.

Mr. Hefferan.—If you concede that these figures are correct and are not forged by us, you can check these by 23½ per cent. You cannot go wrong on it.

President.—That is not our method of accounting.

Mr. Hefferan.—Anybody can adopt any method of accounting. Provided it comes to 23½ per cent. I don't care what method you adopt. That is the actual.

President.—The position as regards costs is this. There is only one company just now that manufactures only wagons, and that is the Indian Standard Wagon Company. In their case there are difficulties in this way. They have not been working long enough. Supposing we came to the conclusion that it

was possible to make an estimate of their reasonable costs—they, of course, manufacture only the C-2 class—would it be possible for us to lay down one scale of costs for them and another for you?

Mr. Hefferan.—It should not be necessary. We should be able to work as cheaply as they.

President.—That is to say, you will have nothing to say if we based our calculations on their figures?

Mr. Hefferan.—No. Give them sufficient support to keep their place full and we will manage to keep our place full. We don't want you to give us different treatment.

President.—At present you have it.

Mr. Hefferan.—It just happened once in a way.

President.—I am just telling you that we should find it very difficult to estimate the real costs on your method.

Mr. Hefferan.—You wanted it in a way in which the Indian Standard Wagon Company has given it. We cannot do that and I think Messrs. Burn and Company cannot do that either.

President.—In the case of the Indian Standard Wagon Company, as far as their figures go, there is nothing assumed.

Mr. Hefferan.—Neither in our statement is there anything assumed. Every figure is from the audited books. In that way our figure is just as accurate as any other figure. These are absolutely correct, because the figures in all these statements are taken from our audited books.

Mr. Mather.—An additional complication is that these figures are for a factory which is no longer in existence.

Mr. Hefferan.—That is true.

Mr. Mather.—And all that we can assume is that in the future when you commence work at your new factory at Dun Dum you may be able to produce more economically to some extent.

Mr. Hefferan.—You can consider us as defunct and give the other two companies protection and we shall manage to make a living at the same time.

Mr. Mathias.—The fact that the Indian Standard Wagon Company manufacture C-2 whereas you manufacture A-1 would not really affect you, would it? Supposing we came, on a consideration of the manufacture of C-2 wagons, to the conclusion that 15 per cent. duty was desirable on imported wagons, and if we applied that 15 per cent. duty in your case, you will have no objection?

Mr. Hefferan.—No, because for the C-2 the lowest British price is £171-15-0.

President.—I may point out that it affects your percentage rather in a peculiar way. If you take 1920-21 figures the total cost of materials and productive labour is about Rs. 31 lakhs in that year and your cost above is Rs. 3,12,000 which is only 10 per cent.?

Mr. Hefferan.—You will find a big figure for unfinished work for the first year brought over.

President.—Not very big. Is that accounted for by the fact that the cost of material was very high?

Mr. Hefferan.—Yes. A very large quantity of material came in that year. With our business we do not work like clock work. Suppose we get an order. As soon as an order comes, say, in November, we order all our materials, and we get an order again, we order all our materials. The materials on that order would be worked up next year.

Underframes.

President.—As regards underframes, it is very difficult here also to know what the costs may be.

Mr. Hefferan.—The same rates and everything else we have applied here also. We have not departed from the method.

President.—For underframes you import a good many more parts than you get locally. How is that?

Mr. Hefferan.—A good deal more parts we have to import. The bogey sole bar is a thing we have to import; that costs about Rs. 1,000.

President.—Even then Tata's material is given as Rs. 3,130 against British material Rs. 5,000.

Mr. Hefferan.—The brake gear is duplicated, the cylinders are duplicated. There are two sets of cylinders and two sets of brakes in that.

President.—So far as underframes are concerned you apply the same percentage.

Mr. Hefferan.—Exactly the same.

Dr. Matthai.—How many wagons do you consider equivalent to an underframe?

Mr. Hefferan.—Two wagons. If you gave us 600 wagons or 300 underframes, that would mean the same amount of work for us.

President.—You have put down Rs. 154 per ton for fabricating and Rs. 264 for forging.

Mr. Hefferan.—This is comparing with actual British price. We were told this price. F.o.b. English price was £540: Freight and charges was £40 or a total of £580. Equivalent of that in rupees is 9,000. I have accounted for Rs. 9,000. It may be that the price of labour may be a little different but we have accounted for Rs. 9,000.

President.—How do you get this £540?

Mr. Hefferan.—That was told us early last year. I think they were East Indian Railway underframes. The freight and charges was £40 making a total of £580. That Rs. 9,000 is an actual figure.

President.—Does your wagon include lighting arrangement?

Mr. Hefferan.—We do not supply the dynamo; the purchasers put on their own dynamo. We put the suspension brackets.

President.—What was your tender this year? Was it more or less the same as the G. I. P.?

Mr. Hefferan.—Practically the same with slight modifications.

President.—What was your quotation?

Mr. Hefferan.—Our price was Rs. 9,550 to about Rs. 9,610. We can give you the exact figures.

President.—You have brought it down by about Rs. 600 or Rs. 700. How were you able to do it?

Mr. Hefferan.—We had to do it. It is no use putting down wagon building works if we cannot get going. Our London directors would say "Why put in this wagon building department if you can't put orders for it."

Mr. Mather.—You ought to cover your costs I suppose?

Mr. Hefferan.—Yes. Practically with the idea of being able to cover our costs. We are having more room in our new works at Dum Dum and we hope to be able to turn out the work more economically than we could at Garden Reach.

Mr. Mather.—Does covering your costs mean profit?

Mr. Hefferan.—No profit. I don't think we should get a big profit out of this order, but having started the new works we wanted to put something in it straightaway.

President.—You quote a passage from a letter written by the Indian Merchants' Chamber. The suggestion there is that what they say is true?

Mr. Hefferan.—It is true. These Provincial Governments that pay towards the upkeep of the general fund get their duty refunded.

President.—Government getting it back does not mean that the duty goes back to the pocket of the railways.

Mr. Hefferan.—I don't mean the railways. It may be the Public Works Department or any other department. I say that these Provincial Governments spend money on duty and get it back again.

Mr. Mathias.—But the same department may not get it, not necessarily.

Mr. Hefferan.—But if the province gets it back the department will have more money to spend.

Mr. Mathias.—It would go back to the general revenues.

Mr. Hefferan.—It would be available for general purposes. That province would be so much better off than if they had not got a refund.

President.—So far as railway material is concerned, the Railway Board tell is that there is no refund of customs duty on stores imported by either State-managed Railways or Company-managed Railways.

Mr. Hefferan.—I didn't say particularly railways.

President.—You have put it there in a way which led me to think that it was railways that you meant. As regards the relief that you claim you want a tariff of 20 per cent. on wagons if there is no duty.

Mr. Hefferan.—Yes.

President.—What do you suggest if there is a duty? First of all how do you work out this 20 per cent.? I take it that it is the difference between your figure Rs. 3,677 and Rs. 3,160.

Mr. Hefferan.—Yes.

President.—But that includes duty.

Mr. Hefferan.—We have given you an example without duty at page 258. We say " If we assume there is no duty on steel and no 10 per cent. duty on wagons, the two costs are as follows:—

British—Rs. 2,902-2.

Out cost—Rs. 3,360-8."

President.—It does not work out to 20 per cent.

Mr. Hefferan.—There is no duty for either.

President.—You ask for 20 per cent. if there is no duty. I am just trying to point out if there is a duty what would you do?

Mr. Hefferan.—There is a difference of Rs. 458 per wagon or 18 per cent.

President.—You deduct Rs. 356 for erection.

Mr. Hefferan.—Yes, and landing.

President.—But then if you take your other figure on page 257 which includes the duty, 20 per cent. is in addition to the 10 per cent.

Mr. Hefferan.—Yes. We should have to make appreciable reduction in our costs of manufacture before we made a profit out of that. We feel that if we were certain of going ahead for 5 or 6 years, it would make a big difference to us.

Mr. Mather.—In any event you expect to manufacture at Dum Dum more economically than at Garden Reach.

Mr. Hefferan.—The trouble at Garden Reach is we were very cramped.

Mr. Mather.—What reduction on the costs of a wagon do you expect to achieve?

Mr. Hefferan.—Probably in the first lot of wagons there won't be a big reduction.

Mr. Mather.—When you settle down at Dum Dum.

Mr. Hefferan.—In about 4 or 5 years we shall be able to work Rs. 300 cheaper per wagon.

System of tenders.

President.—You ask for this duty. I want to know how you will expect the railways to deal with tenders.

Mr. Hefferan.—It is very difficult to do anything until you have decided what you are going to give the Steel Company. We can't fix on anything till you fix the tariff on steel.

President.—Now I am not dealing with the amount of duty. You attach great importance to the rupee tenders and you want tenders to be invited in India.

Mr. Hefferan.—Yes.

President.—Supposing the total demand of the railways is for 7,000 wagons, do you suggest that they must call for rupee tenders for 7,000 wagons from all including the British manufacturers?

Mr. Hefferan.—Yes.

President.—Then supposing the British tender is the lowest of all. . . .

Mr. Hefferan.—If you give us a duty and if the duty doesn't cover it, they beat us.

President.—You will be without work.

Mr. Hefferan.—We can't help that. We make a statement here that you should give us 20 per cent. on wagons when there is no duty at all and if there is a duty you should give us the equivalent of that duty whatever it is. Then if the British manufacturer comes along and, beats us, I say we are beaten.

President.—You will say it was dumping.

Mr. Hefferan.—They will make an effort, if you give us 20 per cent. The simplest way of all is to restrict the wagon orders to Indian manufacturers. Give them according to their quotations— the first lot to those who quote the lowest price and to those who quote at the highest, give them at the tail end.

Mr. Mather.—At the higher price?

Mr. Hefferan.—Yes. Suppose you asked for 7,000 wagons and 4 people quoted. If two firms of manufacturers quoted lower than the other two, the first two get the number they wanted and the rest would go without, unless they came along and took it at that price. They have no right to quote any higher price. You are not here to support the weakest. You are here to support the industry. In an Indian tender like that, if two of them 1 and 2 quoted much lower than 3 and 4, 3 and 4 would go out. They are not competent to build wagons.

President.—Supposing we recommended protection and they called for 7,000 wagons. There are four of you. If all of you are underquoted by the British manufacturer, and the railways say to the Indian manufacturers, " here is the price, are you prepared to take it "?

Mr. Hefferan.—The Railway Board will never do that. The Railway Board would much rather go home in spite of the frequent occasions on which they have been told that wagons we are making are as good as the British wagons. The railways themselves say that and the Controllers of Inspection say that the wagons and underframes we are building are as good as the British wagons. That is the first thing. It is no use making that a question of price.

President.—What system do you propose of inviting tenders in a case like that. If you were able to manufacture the whole quantity in the country, then, of course, there would be no question. We can say that all the orders must be placed in the country. If you could only manufacture part of the requirements and then the British tender is the lowest of all, how is the work to be distributed?

Mr. Hefferan.—Unless you give us a duty on these lines, we have no hope of competing with the British manufacturer.

President.—There is one other point also that if tenders are invited in the country only for a certain number of wagons, it is not impossible that the wagon builders may combine.

Mr. Hefferan.—They will to-day probably, but as soon as other people find out that wagon builders are getting fabulous prices, it won't be long before

there will be no more combination. There are people on the look out to invest their money. They will very soon come into the field of competition.

President.—They may not come for a long time.

Mr. Hefferan.—Government are blowing hot and cold. There is no continuity of purpose. There is vacillation. To-day they say they will and to-morrow they say they will not. It is that that keeps capital away.

President.—Do you think if the duty was sufficiently high, more capital would be attracted?

Mr. Hefferan.—Yes.

President.—There might be over production.

Mr. Hefferan.—No harm.

President.—Then the same thing happens.

Mr. Hefferan.—If the Government have no orders to give, we have no complaint against them. We can't in reason complain. It is just the same as other business. If the business is not going in the country, we can't blame anybody, but what we do complain of is that the business is going and it is going out of the country. If there is no business and if the Government say to-morrow " I have no orders for wagons " we would be quite satisfied. It would not hurt us. If there is no business what could we do? If they say you are not going to get any orders for wagons and send orders for 7,000 wagons to Britain, that would certainly be a hardship.

President.—You are complaining of this very thing. You are talking about the continuity of orders. It is difficult to secure it always.

Mr. Hefferan.—By " continuity of orders " we mean if there is an order, give it to us and don't send it home and tell us you are not going to get any order.

President.—You don't complain of there being no orders this year. You have got no works at present.

Mr. Hefferan.—It matters to everybody. We shall have some works in time for the next call for wagons.

President.—Whilst you are building, you are not affected by not getting any orders. The other people may be.

Mr. Hefferan.—We shall be.

President.—Your works won't be ready till October.

Mr. Hefferan.—We can't go to Government and say whether you have orders or no orders, we must have orders. If the railways do not require the wagons, well they don't in the same way as in all our other business. If the public do not want buy anything we can't force them. We have got to suffer a loss and let our works remain idle.

Dr. Matthai.—In what will you able to erect a wagon works to produce 1,000 wagons.

Mr. Hefferan.—18 months. Rs. 20 lakhs.

President.—Rs. 20 lakhs for 1,000 wagons.

Mr. Hefferan.—Yes. The total capital including working capital.

Mr. Mathias.—Supposing that for a period of 3 years, means were devised for giving a guarantee that the wagon works in India would get orders for 4,000 wagons, at the end of the three years do you think that they would be in a position to do without such a guarantee?

Mr. Hefferan.—No. You cannot build an industry in that short time. I should say Tatas use the same labour as we do. They require support. In the same way we consider that we require support.

Mr. Mathias.—I am not suggesting that the guarantee should be given only for three years. Supposing protection was considered necessary and a duty was imposed and in addition means were devised by which a certain number of wagons would for three years be allotted to various works in India, at the

end of three years, would they be able to carry on without such a guarantee, but with such protection as was considered necessary to continue?

Mr. Hefferan.—Yes. If protection that was necessary to get the orders in India were indicated, we would not want any guarantee.

Mr. Mathias.—What about dumping?

Mr. Hefferan.—Dumping will come in any case.

Mr. Mathias.—You will take your chance.

Mr. Hefferan.—Yes. You cannot stop dumping.

Mr. Mather.—On page 307 under clause 4 you say that the weight of steel castings is 4 cwts.

Mr. Hefferan.—That is for wagons.

Mr. Mather.—On page 293 Burn's have given the weight of steel castings as 7½ cwts.

Mr. Hefferan.—They have taken cast steel buffers. We always put in pressed steel buffers.

Mr. Mather.—As regards underframes you give the castings required per underframe is 38 cwts. and Burn's 25 cwts.

Mr. Hefferan.—This 38 cwts. is the actual weight that we were charged by the Hukumchand Electric Steel Works for the castings they supply.

Mr. Mather.—Do you mean the rate?

Mr. Hefferan.—This is weight. You substract the weight of the axle-box. That was the amount of steel castings which Hukumchand Electric Steel Works weigh. They are very rough and heavy castings. I took that from the Hukumchand's list which gives the weight of castings.

Mr. Mather.—You have actually built underframes.

Mr. Hefferan.—Yes.

Mr. Mather.—That is the weight you have actually used?

Mr. Hefferan.—We have to machine an awful lot of it.

Mr. Mather.—Do you think that would bring it down to Burn's figure?

Mr. Hefferan.—It will bring it down by 13 cwts.

Mr. Mather.—As much as that?

Mr. Hefferan.—Yes. These steel castings we are importing for the Great Indian Peninsula wagons. Hukumchand's price is 93 per cent. more than the imported price.

President.—That was the Continental price.

Mr. Hefferan.—Yes.

Dr. Matthai.—In clause (6) the price of the local rough castings is given as Rs. 33 per cwt. What would be the cost of machining?

Mr. Hefferan.—About Rs. 7.

Dr. Matthai.—The prices that you give in clause 9, *viz.*, 14 per cwt. for bogie castings and Rs. 18 per cwt. for axle-boxes are I take it Continental prices.

Mr. Hefferan.—Yes.

Dr. Matthai.—What would be Hukumchand's quotations against Rs. 14 and Rs. 18.

Mr. Hefferan.—Rs. 27 for steel castings and Rs. 26 for axle-boxes. I think I can give you the exact figures.

Dr. Matthai.—You might include the cost of machining in Hukumchand's prices.

Mr. Hefferan.—Yes. We buy them unmachined except the axle-boxes which would be machined. Hukumchand's are quite young. Their electric furnace is intended for quite a different class of product. They will not be able to compete with the ordinary imported castings.

Mr. Mather.—In your letter of the 9th July you say " Appendix II shows the source of origin of the material, their quantities and their costs, prepared as required by the Railway Board, who ruled that exchange for imported material should be that ruling on the first working day of the month . . . . and so on." What use did the Railway Board make of information of that kind?

Mr. Hefferan.—For those orders they did make exchange allowance.

Mr. Mather.—But they make no such allowance now.

Mr. Hefferan.—No. I only put that there to give you the reasons why those detailed costs do not agree with the costs given in the body of the statement.

Mr. Mather.—I have been looking through these lists of material for your different orders. There appears to be only one that contains an appreciable amount of Indian steel.

Mr. Hefferan.—That is the latter one. As a matter of fact Tata's are not keen to give us wagon material. They would rather that we did not go to them. They are not keen on rolling.

Mr. Mather.—Does that apply to sheets and plates?

Mr. Hefferan.—As regards plates, they have stopped us till October.

Mr. Mather.—Has that been the case last year?

Mr. Hefferan.—Yes.

Mr. Mather.—And sheets as well?

Mr. Hefferan.—The metal at their disposal, they will put it in the bar mill. I don't think that they particularly singled us out. Simply they are not keen on supplying wagon material. Every ingot they make is tested.

Mr. Mather.—Do you find that useful?

Mr. Hefferan.—Yes, because we can work with some confidence then. I suppose Government pay them bounty only on tested ingots. But Tata's I understand do some untested material for the bazar.

Mr. Mather.—They get the bounty without any question of test.

4. MESSRS. PARRY'S ENGINEERING, LIMITED.

Representation, dated the 14th May 1926.

We have the honour to acknowledge receipt of your communication, dated 16th April 1926.

In our letter, dated 8th July 1925, we submitted evidence relating to the sections of the present Import Tariff Schedule II which affect our manufactures. At that time the disadvantages from which we were suffering were in part due to the rate of exchange benefitting the importer of tipping wagons. The rate of exchange has, however, remained about the same throughout the past 9 months and while the cost of raw material has been somewhat reduced, the accompanying statements show our position as manufacturers to be more unsatisfactory than at the time when last we had the honour of addressing your Board.

We submit the following statements:—

1. Statement showing comparison between selling rates of Parry's wagons and imported wagons with duty increased to 50 per cent. *ad valorem.*
2. Statement of quantities of steel sections in tipping wagons, etc.
3. Comparison of total duty included in wagons manufactured by us and in imported wagons.
4. Comparison of duty payable on coal tubs and switches.

The figures we give of cost of steel are based on lowest imported rates, irrespective of any stocks which have been purchased at rates higher than those prevailing at present. Our selling prices bear no relation to our actual gross costs as in order to retain our position we have been compelled to reduce our price below a figure which would cover all overhead charges.

We again place before you the following figures showing present tariff rates have made our position still worse during the last 9 months:—

Tipping wagons sold second half, 1923 . . .	748
Tipping wagons sold first half, 1924	525
Tipping wagons sold second half, 1924 . . .	452
Tipping wagons sold first half, 1925	419
Tipping wagons sold second half, 1925 . . .	167

We submit the enclosed statements as indicating that the duty on imported wagons would require to be increased at least to 50 per cent. *ad valorem* before we can compete with the imported standard article in the open market.

Enclosure No. 1.

Statement showing comparison between selling rates of Parry's wagons and imported wagons with duty increased to 50 per cent. ad valorem.

	Rs.
Continental wagons can now be imported at a price of £5-10-0 c.i.f. equal to approximately . .	73
Present duty at 25 per cent.	18·25
Landing and clearing	1·5
(*a*) Total landed cost	92·75
(*b*) Our present average selling price is Rs. 133. Assuming duty on imported wagons at 50 per cent. We have—	Rs.
C.i.f. cost	73
Duty 50 per cent.	36·5
Landing and clearing	1·5
(*c*) Resulting landed cost	111·0

It will be seen from the above that an increase of duty from 25 per cent. to 50 per cent., while giving us some assistance, would still leave the advantage with the imported wagon, even allowing for a reduction in our manufacturing costs through a possible increase in business.

Enclosure No. 2.

Statement of approximate gross quantities of steel in tipping wagons, coal tubs and switches.

	Standard Tipping Wagon.	Coal Tub.
	Cwt.	Cwt.
Angles	1·25	·5
Channels	1·75	1·5
Sheets	2·5	3·0
Flats	·25	1·0
Rounds	·5	·5
	(*a*) 6·25	(*b*) 6·5

18-lb. 2 ft. gauge switch. 16′ 6″ long.

	Cwt.
Rails	4·4
Steel sleepers	1·1
Flats	·05
Miscellaneous	·55
(*c*)	6·1

Enclosure No. 3.

TIPPING WAGONS.

Comparison of duty included in wagons manufactured by us and in imported wagons.

—	1923.	1924.	1925.	1926.
	Rs.	Rs.	Rs.	Rs.
Average selling price of "Parry" wagon	160	149	142	133
Approximate cost of steel per wagon	71	60	54	45
Approximate duty included in above cost of steel.	6	12	12	12
Average selling price of imported wagons	143	120	115	106
Duty paid per imported wagon	19	24	23	18

N.B.—These figures show that while both importers and manufacturers in India have reduced manufacturing cost, importers have in addition benefited through a reduction in duty payable of Rs. 5 per wagon against a fixed rate of Rs. 12 per wagon payable by manufacturers, and the position of the latter becomes more acute as prices of raw material fall.

Enclosure No. 4.

COAL TUBS.

Comparison of duty paid on materials for manufacture of coal tubs and on imported tubs and switches.

—	1923.	1924.	1925.	1926.
	Rs.	Rs.	Rs.	Rs. A. P.
(a) Average selling price of "Parry" tubs .	140	135	120	117 0 0
(b) Approximate cost of steel per tub . .	54	51	41	32 0 0
(c) Approximate duty included in above cost of steel,	5	10	10	10 0 0
(d) Average selling price of imported tubs .	120	110	100	95 0 0
(e) Duty included in imported wagons .	16	22	20	16 0 0
18-lb. Switches.				
(a) Average selling price of "Parry" switches	142	115	108	90 0 0
(b) Approximate cost of steel per switch .	60	45	40	36 0 0
(c) Approximate duty included in above cost of steel.	6	17	10	10 0 0
(d) Average selling price of imported switch	110	95	85	80 0 0
(e) Duty included in imported price . .	14	19	17	16 8 0

5. THE HUKUMCHAND ELECTRIC STEEL WORKS.

A.—Written.

(1) *Representation, dated the 19th April 1926.*

With reference to the Commerce Department Resolution published in the press on the 2nd instant requesting the Tariff Board to examine the claims for protection of industries making steel products, we desire to again address you regarding our claim.

The Tariff Board in their report on our original claim stated that through lack of sufficient reliable information on certain essential points they were unable to make any recommendation at that time. The principal points on which information was lacking were:—

(1) the extent of the probable demand for steel castings in India;

(2) whether an ample supply of raw material (steel scrap) is likely to be available in or near Calcutta at a reasonable price;

(3) whether the industry will eventually be able to stand alone without assistance from Government.

With regard to item 1 we have considerably more information at our disposal now than we had in 1923, both as a result of our experience in securing orders from various railways and other public bodies and from enquiries made from them as to their probable demand.

In our evidence before the Tariff Board in 1923 we stated that in our opinion the annual demand for axle boxes alone for all the railways in India would be more than sufficient to keep our works fully employed. The Tariff Board were inclined to doubt this statement on the grounds that when once the use of steel axle boxes had become universal the annual demand would fall off considerably. We do not agree with this view. The report by the Railway Board on Indian Railways for 1923-24, Vol. II, gives statistics showing the Rolling Stock Equipments of all the Railways in India. From these official figures it is seen that the number of axle boxes actually in commission during the period under review was approximately 1,000,000. Taking the very conservative percentage of 5 per cent. for annual replacements it is clear that approximately 50,000 boxes are required annually. The above figures apply even on the assumption that only Cast Steel Boxes are used, for the life of a steel box is certainly less than the life of the wagon of which it is a component part and in the case of ordinary 4-wheeled wagon it is considerably less than 20 years. We have experienced considerable difficulty in proving this figure chiefly on account of the reluctance of many of the Railways to inform us officially of their requirements. The following figures and remarks, however, give support to the statement:—

In November 1925 orders were placed with wagon building firms in India for 3,200 wagons requiring 12,800 boxes	12,800
Also in January 1925 orders were placed abroad for 1,134 wagons requiring 4,536 boxes . . .	4,536
During 1925 we received orders from various Railways in India for 7,500 boxes	7,500
TOTAL .	24,836

In addition to the above figures many Railways continue to import boxes from abroad and there are also very large numbers of Cast Iron boxes being made in the workshops of the Railways themselves. The tendency now is to discontinue the use of Cast Iron boxes altogether and substitute steel boxes. As evidence of this we may say that in 1924 the O. & R. Railway

placed an order with us for 20,000 steel boxes with which to replace Cast Iron. The East Indian Railway are following suit and in 1925 they placed an order with us for 5,000 boxes.

The following are the estimated requirements of those of the Railways which have informed us officially of their probable annual demands:—

	Average.
East Indian Railway	3,609
H. E. H. the Nizam's Railway	730
Eastern Bengal Railway	1,036
B., B. and C. I. Railway	3,000
North Western Railway	3,050
TOTAL	11,425

The above are the only official figures we have been able to obtain but it is reasonable to assume that the numbers required by the remaining Railways must be at least equal to the above seeing that they include the B. N. Railway, the G. I. P. Railway, the S. I. Railway, and the S. M. Railway.

We, therefore, have not less than 22,000 boxes required for replacements alone excluding the new rolling stock already mentioned.

Replacements	22,000
New Rolling Stock	17,336
TOTAL	39,336
or say	40,000

In addition to the axle boxes there are numerous other components demanded annually in very large numbers of which the following is a selection with the numbers actually ordered from us during 1925:—

Name of Railway.	Description Casting.	No. Ordered.	Weight each.	Price.
1. G. I. P. Railway	Spring Links	1520	1 Qr.	Rs. 38 cwt.
2. Do.	Horn Cheeks	1000	1 Qr. 6 lbs.	Do.
3. Do.	Do.	2000	25 lbs.	..
4. B. N. Railway	Spring Hanger Brts	400	..	Rs. 10-6 each.
		400	..	Rs. 10-12 each.
5. E. B. Railway	Head Stock Brts 8¼".	500	1 cwt.	Rs 38 cwt.
6. Do.	Do. 9¼ or 10	500	20 Qr. 19 lbs.	..
7. Do.	Sockets, inner	200	26 lbs.	Rs. 15-8 each.
	Sockets, outer	500	1 Qr. 3 lbs.	Rs. 15 8 each.
8. E. I. Railway	Axle Boxes	5000	2 Qr. 15 lbs.	Rs. 24-8 each.
9. N. W. Railway	Brackets Truss Rod Hangers.	2000 pairs	17 lbs.	Rs. 7 per pair.

Additions to plant and machinery, signalling apparatus, permanent-way repairs, tools, dies and die steel, anvils for steam and drop hammers, etc., have also to be considered.

Bogie Underframes.

The weight of steel castings in a four-wheeled wagon may be taken at 7 cwts. only. In the case of Bogie Underframes it is very much greater. In 1924 we supplied underframe castings to two wagon building firms in Calcutta. The weight per set amounted to 26 cwts. excluding axle boxes. As the manufacture of underframes now seems likely to become established

as a result of the grant of a bounty it may be assumed that a further large demand for castings will be created. Assuming the present capacity of the builder to be 200 underframes per annum, we should have demand for 5,200 cwts. of castings yearly, excluding axle boxes, of which 8 are required per underframes. In connection with underframe castings we should like to draw the attention of the Tariff Board to the statements furnished by Messrs. Jessop & Co., dated July 24th, 1925 (pages 302 to 309).

In these statements the weight of steel castings per underframe is given as 5 cwts. only. Actually it is 26 cwts. excluding axle boxes. A large number of components supplied by us as steel castings have been entered in Messrs. Jessop & Co.'s lists of materials under other designations.

Locomotive Repairs.

The number of Locomotives at present in commission on Indian Railways is approximately 10,000 (*see* Report by Railway Board on Indian Railways, 1924). We are slowly but surely increasing the quantity of locomotive castings turned out annually and those Railways which have placed trial orders with us are now beginning to place repeat orders with us. We anticipate that locomotive castings will form a very considerable proportion of our future output.

Locomotive Building in India.

We are informed by the Peninsular Locomotive Company, Tatanagar, that they anticipate being in a position to start building locomotive in the very near future. They have asked us to furnish them with details of all the Locomotive Castings we have manufactured in India for Indian Railways and to state what is our capacity for such castings with a view to arranging their future programme. Should they succeed in establishing this manufacture a further very considerable demand for steel castings will be created.

Miscellaneous Castings for General Engineering.

Our output of miscellaneous castings for general engineering purposes is increasing. There is a large market for this class of work in India. From 20 to 25 per cent. of our output is in this form.

Automatic Centre Buffer Couplers.

We understand that the Railway Board have definitely decided to substitute Automatic Centre Couplers for the existing double buffer and draw bar gear on all rolling stock on Indian Railways. If this is the case there will be ample work for more than one steel foundry in India for the next 5 years or more. Subsequently there will be a regular demand for replacements and repairs to these couplings. In fact it is difficult to see how the railways could carry on after the change is made without some local source of supply or castings. In this connection we may say that the Chief Controller of Stores, Indian Stores Department, has visited our Works on several occasions to ascertain our capacity for these castings and has promised us our full share of the work when the time comes for orders to be placed.

Steel Castings for Munition of War.

We are from time to time receiving orders from the Director of Ordnance Factories and manufacture for various parts of Gun Mountings and other Munitions. Our plant is particularly well adapted for the manufacture of a large variety of casting for munition purposes. In addition to castings we can, if called upon, produce any of the high class specification steels required for the manufacture of gun, rifles, bayonets, etc. As an indication of the quantities of castings likely to be required by the Ordnance Department for defence purposes, we were recently asked by the Superintendent, Metal and Steel Factory, Ishapore, to furnish him with quotations for the

manufacture of aerial bombs weighing respectively 5 cwts., 1 cwt. and 20 lbs. The probable numbers required were stated to be 5,000 or more per month.

In the event of war a vast quantity of special steel for the manufacture of High Explosives and Shrapnel Shells, Gun Tubes and Jackets, Rifle Barrels, etc., is certain to be required at very short notice. Our Works could be turned on to this class of works with little or no delay. In connection, therefore, with national defence our Works are already of considerable potential value and in the event of War might become an invaluable auxiliary to the existing Government Ordnance Factories. It should be stated here that the class of steel required for munition purposes is quite distinct from the ordinary structural and rail steel produced by firms like Tatas. It is of a special quality manufactured to very close Chemical and Physical Specifications and although required in comparatively small quantities these quantities are sufficiently large to fill our Works to its full capacity. We should also mention that in the case of the aerial bombs and similar casting these could not be manufactured in the existing Government Steel Works at Ishapore, as their entire melting capacity would be required to produce rolled bar for shell, etc. Moreover, their plant is unsuitable for the production of castings of this nature.

Steel castings of the wagon building industry.

The Tariff Board in their report on our original claim in 1923 stated that the success of the Steel Casting industry depended to a great extent on the success of the Wagon Building Industry in India. The grant of a bounty on all wagons and underframes built in India should go far to ensure the development and ultimate success of this industry. So long, however, as the wagon building firms decline to place orders in India for the castings they require the steel castings industry stands very little chance of benefiting by the prosperity of the wagon industry. The chief objection put forward by the wagon builders to the purchase of castings from us is that of price and it seems only fair that if protection is given to wagon builders it should also be given to the manufacturer of wagon components to enable the latter to reduce his prices sufficiently to render them competitive with the imported article. Sir Charles Innes in his speech in the Legislative Assembly on February 17, 1926 (*see* Legislative Assembly Debates, Vol. VII, No. 17) stated that as a result of the bounty, Government had been able to place orders in India for 3,200 wagons as well as a large number of underframes. With one trifling exception we have not been asked even to quote for the castings required to be incorporated in these wagons. For the wagons alone, 12,800 complete cast steel axle boxes had either to be imported or manufactured in this country. No orders and no enquiries for these axle boxes have come our way. So that while in the opinion of the Tariff Board the success of the castings industry is dependent upon the success of the wagon building industry, and in spite of the fact that, according to Sir Charles Innes, the wagon building firms are full to their maximum capacity, no benefit whatever has been derived by us.

We have shown that at least forty thousand axle boxes are required annually in India and this item alone provides for an output of 1,250 tons of castings per year. During 1925 we supplied to railways approximately 275 tons of miscellaneous castings for rolling stock excluding axle boxes and 260 tons approximately of miscellaneous castings to general engineering firms. We have every reason to believe that the last two items will continue to steadily increase. In fact, the Railway Board have informed us that there appears to be no doubt that much larger orders will be placed with us in future.

It is the policy of the Government of India to devel p and increase railway facilities to the utmost extent by extending lines and increasing rolling stock. These extensions must create a still larger demand for steel castings.

From the foregoing figures we think it may be assumed that, there is a certain market for not less than 2,000 tons of steel castings per annum even if we leave out all those items about which there is any element of uncertainty such as Locomotive Castings, Munitions, Automatic Centre Couplers, etc. We trust, therefore, that the Tariff Board will now agree that there is already a sufficient market for our product and that market is likely to increase rather than diminish.

We have stated that the only objection the wagon builders can raise is that of price. They can have no objection on the score of quality as no castings leave our Works unless they are inspected and passed by the Controller of Inspection, Indian Stores Department.

The quantity of raw material likely to be available in or near Calcutta.

Item 2.—In connection with the question of future supplies of essential raw material (chiefly steel scrap) we recently circularised the Controllers of Stores of all the first class railways asking them to inform us what were their annual sales of scrap. The figures vary within such wide limits that we can hardly believe they are in every case correct. The N. W. Railway informed us that during 1924-25 they sold 10,000 tons of scrap by auction whereas the E. B. Railway informed us that they only sold 180 tons during the same period. Large quantities of scrap have, however, been periodically put up for auction by all the railways. In Calcutta we have been offered suitable scrap up to almost any quantity at steadily decreasing prices. Very large quantities of scraps also continue to be exported to Japan and other countries, so much so that we have had to write down the value of our own scrap to Rs. 20 per ton. The only scrap we have bought since 1923 is in the form of borings and turnings which are of no value to the ordinary dealer and which we get delivered in our Works at about Rs. 10 per ton. We have running contracts with several railways for the purchase of all their turnings and borings and this, together with the scrap in the form of heads and risers from our own castings keeps us going. Our policy for the future will be to buy only turnings and borings as this is the best form of scrap for our melting process. In the matter of price of scrap we are in a much better position than the home manufacturer who is at present paying approximately Rs. 30 per ton for turnings against Rs. 10 paid by us. Moreover, these turnings, having little or no value for any other purpose, the Railways and Engineering firms are ready to accept almost any price rather than have it on their hands. The scrap position causes us no anxiety at present, nor do we anticipate any appreciable rise in price in future for such scrap as we use. With regard to our other raw materials we obtain practically all we require locally. Graphite Electrodes, Plumbago Stoppers, Magnesite Bricks, Ladle Stoppers and Ferro Silicon are the only materials we import.

Whether the industry will eventually be able to stand alone without assistance from Government.

Item No. 3.—The results of the past three years' working have satisfied us that the steel casting industry will eventually be able to carry on without any assistance from Government. It is clear that provided sufficient orders can be secured to keep our Works more or less fully employed our cost of production will come down to an extent which will enable us to sell our products at prices competitive with imported castings. That real progress has been made toward this end is proved by this steady increase in output since we first started manufacturing. The following figures illustrate this:—

In 1922 we delivered 661 cwts. of castings.
In 1923 we delivered 5,601 cwts. of castings.
In 1924 we delivered 10,183 cwts. of castings.
In 1925 we delivered 15,134 cwts. of castings.

An increase from year to year over a period of four years of 250 tons per year proves that the industry is establishing itself and that the users of steel castings are gaining confidence in us. The following is an analysis of our production cost for the year ending 31st March 1925:—

Expenditure.

	Rs.	A.	P.
Stores	1,39,156	7	0
Electricity	67,576	7	4
Labour	1,27,937	11	3
Supervising establishment . . .	45,639	13	3
Other overhead charges . . .	34,614	12	0
TOTAL .	4,14,925	2	10

Nett sales cwts. 13,798.

Cost per cwt. Rs. 30-3-0.

Interest and depreciation for the year at 6 per cent. amounted to Rs. 91,331 or Rs. 6-14-0 per cwt., bringing the total cost up to Rs. 37-1-0 per cwt., the total sales were valued at Rs. 4,84,018 only or Rs. 35-1-0 per cwt.

There was thus a loss of Rs. 2 per cwt. In the above calculation no debit has been taken for head office rent or Managing Agents' salaries or commission, nor has any allowance been made for repairs except those actually incurred. We anticipate that if the output of the works can be worked up to 200 tons per month or 2,400 tons per year, our charges for interest and depreciation would be reduced by Rs. 4-10 (Rupees four and annas ten) per cwt. and the cost of supervision and overhead charges by Rs. 2 per cwt. Other savings are also possible with the large output such as reduced electric power consumption, fewer repairs to furnaces, lower fuel consumption in coal fired furnaces and considerable saving in time of working per heat in the electric furnace. These would probably account for a further saving of Re. 1 per cwt. We may, therefore, expect a total reduction in cost with a full output of Rs. 7-10-0 per cwt., thus making our total cost Rs. 29-7-0 per cwt. We consider this price would be competitive with imported British castings.

We consider that prices in Great Britain at the present time have reached rock bottom and the tendency in future will be upward rather than downward.

The following is a list of prices supplied to us by some of the leading British Founders in July 1925 for typical Railway Castings such as form the bulk of our output:—

Name of firms.	Price per cwt.	F. O. R. or C. I. F.	Exchange 1s. 6d.
	s. d.		
Messrs. Hadfie'ds	35 0	F. O. R. Port	Rs. 28 0
„ Lake and Elliot	40 0	„	Rs. 32 0
„ Edgar Ellen & Co.	29 6	F. O. B.	Rs. 23 12
	45 0	„	Rs. 41 12
	47 6		
	48 0		
„ Cammel Laird & Co.	36 6		
	65 0		
	57 6	Average 53 per cwt.	
	65 0		

„ Robert Hyde and Sons Limited (30 per cwt. ex their works for Axle Boxes only Rs. 23/8 cwt. landed Calcutta).

Spring Steel and other Special Steels.

The original Steel Works Scheme decided upon by the proprietors provided for a complete rolling mill equipment in addition to the plant for the manufacture of steel castings. Before, however, definitely deciding to purchase their rolling mill plant the firm decided to carry out exhaustive experiments to prove that steel suitable for rolling into spring steel bars, etc., could be manufactured in India. They also wished to satisfy themselves that they could produce steel which would meet all the requirements of the most rigid British Standard Specifications. All the experimental work in this connection has now been completed and the results leave no doubt as to our ability to produce spring steel equal in quality and appearance to any in the world. Ingots of spring steel of various sizes were made in our works and arrangements were made with the Superintendent, Metal and Steel Factory, Ishapore, to have them rolled into various sections of spring steel for test. The results of the tests were so entirely satisfactory that the proprietors decided to complete the purchase of a complete rolling mill outfit. This has been done and the mill is being erected and will be started in the near future. The results of all experiments and tests carried out in connection with spring steel manufacture are at the disposal of Tariff Board should they desire to examine them.

Demand for spring steel.

With regard to the demand for spring steel this is assured beyond all doubt. In 1925 during the period April 1st to December 31st the imports of spring steel into India amounted to 4,334 tons, equivalent to approximately 6,000 tons per annum. The value of this steel was Rs. 7,48,148 only. It was sold at prices ranging from Rs. 9 to Rs. 12-8 per cwt.

Production Cost.—The cost of production has been carefully gone into and the proprietors are satisfied that they will eventually be able to compete successfully in the open market for this class of steel. Our total production cost under present conditions of working is approximately Rs. 11 per cwt.

If the manufacture of spring steel can be established and sufficient orders secured to enable us to work our melting furnaces to full capacity it is anticipated that our cost of production would fall eventually to such a figure as would enable us to sell at competitive prices.

It is realised that several years must elapse before we can hope to receive regular orders sufficient to enable us to work our furnaces and mills to full capacity. Each individual railway will require to carry out prolonged and exhaustive tests of spring steel made in India and when they are satisfied as to its quality they will not be disposed to place large orders with us unless our prices are attractive.

We have stated that our present production cost is Rs. 11 per cwt., but we must be in a position to sell at approximately Rs. 9 per cwt. to be certain of securing orders and this price must include our own profit. To enable us to do this and to establish the manufacture we request that the Tariff Board will recommend that the same advantages as granted to Messrs. The Tata Iron and Steel Company, in the matter of import duty and bounty shall be given to us.

The manufacture of spring steel is strictly analogous to Tata's manufacture. The processes involved are identical and the difficulties are if anything greater. We consider, therefore, that our claim to receive the same privileges as Tatas in respect of this manufacture is both reasonable and just.

Establishment of spring steel would reduce cost of casting.

The establishment of spring steel manufacture in our works would benefit us in two ways. In our remarks on steel castings we have shown that substantial reductions in our production costs are only possible if

can work our melting furnaces in full capacity. We have shown that the demand for spring steel exceeded 4,000 tons during 9 months of 1925 and if only one-half of this demand were met by us the quantity of liquid steel required for this, together with the liquid steel required for castings, would absorb all our present melting capacity and probably necessitate the installation of extra furnaces. This the proprietors will not hesitate to do if necessary. In addition, therefore, to establishing a profitable and useful industry in the manufacture of spring steel, we should at the same time considerably reduce the production cost of our steel castings by producing cheaper liquid steel, even if orders for castings should fall far below our melting capacity.

In 1923 we informed the Tariff Board that the full capacity of our Works was 250 tons of castings per month. This figure was based on our estimated melting capacity. We were at that time melting heats of 30 to 35 cwts. only. These have since been increased to 40 cwts. heats and the melting time per heat has been considerably shortened. We now know that each of our furnaces is capable of yielding 6 heats per day of 2 tons each. We can, therefore, produce 24 tons of liquid steel daily and allowing 25 working days per month for 10 months in the year, we get 6,000 tons of liquid steel per year. After allowing 33⅓ per cent. for heads and risers, wasters and other losses we can produce 4,500 tons of castings per annum. This should be more than sufficient to meet the total annual demand for India.

Should the manufacture of spring steel be established as anticipated we have other melting furnaces in reserve to provide the necessary liquid steel. We have recently acquired two 3½ ton and one-half ton capacity Heroult furnaces and these are being held in reserve against future requirements.

Capacity of rolling mills.

The 20" bar mill acquired by the firm has a capacity considerably greater than the total demand for spring steel for the whole of India. The output of the mill would not, however, be confined to spring steel alone, cast steel bars for machine tools, miners crowbars, drills, chisels, etc., are imported in large quantities. During 1925 approximately 2,000 tons of such steel were imported. The firm intend to roll all the above classes of steel in their mills.

On the foregoing grounds we, therefore, appeal to the Tariff Board to recommend the following to the Government of India:—

(a) *Steel castings.*—The grant of a bounty of Rs. 10 per cwt. on our yearly output which would be periodically reduced as our output increases and production costs decrease until it is extinguished altogether. This would, in our opinion, occur in about 5 years, by which time we confidently expect that our works would be in a position to compete against all competition without Government aid beyond that afforded by the usual tariff.

(b) *Spring steel and special cast steel in the form of rolled bars excluding high speed steel and alloy steels.*—An increased import duty and the grant of a bounty equivalent in all respects to that granted to Messrs. The Tata Iron and Steel Company, Limited, for structural steel, etc.

We trust that this application will receive favourable consideration at the hands of the Tariff Board. . . . .

Should any further information be required, we shall be happy to furnish it.

(2) *Letter, dated 4th May 1926, from the Hukumchand Electric Steel Works, Calcutta.* -

As requested by the President, we have pleasure in submitting herewith a detail statement of our production costs of steel castings and spring steel for the year ended March 31st, 1925.

(1) *Steel castings.*

Our works cost excluding overhead charges, Head Office charges, Depreciation and Interest is, as shown on the detailed cost sheet (Sheet No. 1). *

Rs. 26-5-7 per cwt.

Owing to insufficient data having been recorded in the past, we have been unable to compare this with any other period except the half-year ended September 1925, which is also submitted herewith (Sheet No. 2). *

The overhead charges, which include the Manager's salary, the salaries of clerical staff, rent, rates, taxes, advertising and other general expenses amount to

Rs. 3-13-3 per cwt.

No charge has been made for rent of Calcutta Office or for the time spent by the Managing Proprietors of the concern.

We have shown depreciation at 6¼ per cent. on the capital expenditure on the Ballygunge Works which is taken from the audited balance sheet as at 31st March 1925, as follows:—

	Rs.	A.	P.
Buildings	2,03,947	3	11
Machinery and plant	2,17,652	4	3
Electric furnace	3,40,079	8	2
Electric installation	1,15,056	4	10
TOTAL	8,76,735	5	4

6¼ per cent. on above Rs. 54,795
or a further Rs. 3-15-9 per cwt.

Our actual finishing cost is therefore:—

	Rs.	A.	P.	
Works cost	26	5	7	
Overhead	3	13	3	
Depreciation	3	15	9	
TOTAL	34	2	7	per cwt.

Our corresponding figure for the half-year ending September 1925, is:—

	Rs.	A.	P.	
Works cost	24	7	0	
Overhead	4	9	6	
Depreciation	4	2	3	
TOTAL	33	4	9	per cwt.

For purposes of comparison between our own costs and the cost of these imported castings which compete with our regular lines and which are pro-

* Not printed.

duced abroad on a mass production basis, we have taken the price of the imported article at—

Rs. 24-3-8.

This is the price on sterling basis at which we executed a large order for miscellaneous castings for Bogie Underframes for Messrs. Burn and Company during 1924-25. We accepted the order at the lowest imported price for steel castings without regard to our own costs and we attach a letter from Messrs. Burn and Company, showing how the figure was arrived at. We have altered the rate of exchange to 1*s.* 6*d.* as that is approximately the rate of ruling to-day.

	Rs.	A.	P.
Our cost is	34	2	7
The imported price is	24	3	8
Difference .	9	14	11

or say, Rs. 10 per cwt.

We cannot ask for an import duty on steel castings as it is impossible to gather statistics as to past imports, but referring to our paragraph above it is seen that there is a loss of Rs. 10 per cwt. and we have asked for that figure as a bounty on steel castings.

There still remains to be considered the question of manufacturers' profit.

	Rs.	A.	P.
On March 31st we had invested in the business	14,74,904	0	0
Less accumulated loss	2,49,073	0	0
	12,23,831	0	0

We consider that on the above amount a return of 12 per cent. can be justified which amounts to Rs. 1,47,100 or, say, Rs. 10 per cwt.

In our letter, dated April 19th, 1926, we have shewn that increased output would have a great effect upon our costs. It may be taken as an axiom that a Steel Works can only be economically worked provided its Melting Furnaces, etc., are worked continuously and to full capacity. If we can do this, we consider that a saving of Rs. 5-0-0 will be saved on our required profit and Rs. 4-14-8 on our overhead charges and depreciation. With this view we have commenced to manufacture Spring Steel. Our present costs for this manufacture are:—

	Rs.	A.	P.	
Liquid Steel	5	13	0	per cwt.
Less 15 per cent. discard and rolling loss . .	0	14	0	
Ingot Moulds	0	2	0	
Handling Charges and Freight to Ishapore . .	0	3	0	
Ishapore rolling charges	3	2	0	
Depreciation	1	0	0	
TOTAL .	11	2	0	

the lowest imported price of which we have information is Rs. 9 per cwt. c.i.f Calcutta—a difference of Rs. 2 per cwt. To enable us to meet this competition an increased import duty up to 33⅓ per cent. would be necessary to meet our cost of Rs. 11 per cwt. and a small margin of profit.

The imports of Spring Steel into India during 9 months ended December 31st, 1925, amounted to tons 4,334 which was valued at Rs. 7,48,148, with duty and landing charges this would amount to Rs. 10,00,000 or about Rs. 12 per cwt.

The effect of an import duty on the Government of India revenue would be—

	Rs.
23⅓ per cent. on Rs. 7,48,148	2,32,757 in 9 months.
The cost of a bounty of Rs. 10 per cwt. on 20,000 cwts. of Steel Castings would be .	2,00,000
Surplus	32,757

We trust the foregoing is quite clear and will supply the information required.

(Copy.)

BURN AND COMPANY, LIMITED.

No. CW. 6185/H.

HOWRAH, 29TH FEBRUARY 1924.

THE HUKUMCHAND ELECTRIC STEEL WORKS,

30, Clive Street, Calcutta.

DEAR SIRS,

Order No. 8870 of 23/24.

53 B. G. Carriage Underframe sets.

We are in receipt of your letter, dated the 15th instant, and note that you accept our rate of Rs. 27-4-8 per cwt. for the steel castings we have ordered from you. The Railway Company have agreed to allow any increase that may take place due to enhanced Customs Duty.

The rate you have accepted is obtained in the following manner:—

	£1-10-0	per cwt.	f.o.b.
	2-2	„	freight.
	5·4	„	commission.
	1·5	„	charges.
TOTAL .	£1-12-8·9		

	Rs.	A.	P.
Exchange at 1*s.* 4*d.*	24	8	11
Duty	2	7	4
Landing	0	4	5
TOTAL .	27	4	8

It will be seen from the above that sum of Rs. 2-7-4 per cwt. is allowed for Customs Duty at the existing rate of 10 per cent. and this amount only is variable. In the case of enhanced Customs Duty being levied your bills should show a special item as follows:—

"*Increase in cost owing to alteration of Customs Duty from the existing rate of 10 per cent. in force on January 2nd, 1924.*

Increase in Customs Duty per cent. = Rs. ."

Yours faithfully,

(Sd.) BURN & CO.,

Managing Agents.

(3) *Letter, dated 5th May 1926, from the Tariff Board to the Hukumchand Electric Steel Works.*

I am directed to state that it is essential to the proper consideration of your representation, dated the 19th April 1926, that the Tariff Board should be furnished with the fullest possible information in regard to your costs. It would be convenient if this were supplied in the manner indicated below which is based on the lines followed by the Board in Chapter V of their First Report on steel in dealing with the costs of producing steel at Jamshedpur. It will be seen from that Chapter that the costs of production fall under the three main heads:—

I. Works costs.
II. Overhead charges.
III. Manufacturer's profit.

The information required in regard to the first two of these is shown in detail below.

I. Works Costs.

These which include all costs incurred at the works in the process of manufacture should be shown as follows:—

Total finished output.	Tons.	Value.
1. Material, *e.g.*, scrap, refractories, fluxes, Stores, etc.		
Less credit for scrap recovered . . .		
2. Cost above materials—		
Power		
Fuel		
Labour		
Repairs, relining, etc.		
General Works—Supervision—		
(*a*) European		
(*b*) Indian		
Nett cost per ton of output . . .		

The information in regard to works costs should be supplied for each official year since the establishment of the works. If the figures cannot conveniently be given for the official year, the calendar year may be used. Copies of your cost sheets in the form in which you keep them may be supplied for each year or half-year as the case may be.

II. Overhead charges.

These should be sub-divided as follows:—

(*a*) Depreciation.
(*b*) Interest on working capital.
(*c*) Head Office charges.

(*a*) *Depreciation.*—(*i*) In order to ascertain this, it is necessary that the block value should be fixed. This should be shown in the following form which

would give the amount spent each year since the establishment of the works up to date:—

Year.	Land.	Buildings	Plant and machinery.	Miscellaneous.	TOTAL.

(*ii*) The amount of depreciation actually written down year by year and the rate at which it was calculated should be stated. If the amount written off as depreciation is greater or less than that which you consider reasonable for buildings or plant of this type, the rate which you consider reasonable in normal conditions should be stated.

(*iii*) The replacement value at the present ruling prices for the whole block should, if possible, be stated under the above headings.

(*b*) The amount of working capital actually employed should be clearly stated together with the rate of interest which is being paid on it. If the working capital is less than you consider necessary, the amount required and the rate at which it could be procured should be stated. It is essential that the interest paid on this should be distinguished from that paid on the capital invested in the block.

(*c*) Head Office charges include all expenditure incurred by the Head Office on supervision, management, commission, if any, on sales, etc. The expenditure incurred on each of these items should be separately stated, if possible.

III. Manufacturer's profit.

The rate of return you consider reasonable on capital invested in works of this kind should be stated.

2. *Spring steel.*—As regards your representation concerning spring steel, the Board observe that you estimate the cost of production of ingot steel at Rs. 11 per cwt. The Board would be glad to have details showing the manner in which this has been arrived at as nearly as possible in the form in which you have been asked to show your works costs for steel castings.

The Board would also be glad to have the estimated block value of your proposed rolling mill and its necessary equipment under the same headings as those given in paragraph 1, as also the estimated cost of rolling under the same heads as the works costs.

The Board would also be glad to have the results of the experiments and tests in connection with the manufacture of spring steel mentioned in your representation. In this connexion, will you kindly state the charges per cwt. made by the Ishapore Factory for rolling steel.

3. The first of your specific requests is:

(*a*) A bounty of Rs. 10 per cwt. should be granted on steel castings, subject to periodical reduction until it is totally extinguished in about 5 years. The Board would be glad to know the amount of the bounty you consider should be given in each of the 5 years,

your estimated output during each of these years, and the reduction in your costs which you consider can be attained in each year.

(*b*) Your second request is for an increased import duty and the grant of a bounty for certain kinds of spring steel and special cast steel, equivalent in all respects to that granted to the Tata Iron and Steel Company, Limited, for structural steel, etc. It is difficult for the Board to deal with a proposal put forward in this form. The Board would be in a much better position to examine your proposals if you were to enumerate all the products you (*a*) actually manufacture at present, (*b*) propose to manufacture in the near future, and were to state the amount of bounty or duty you consider required, in a tabular form.

(*a*) *Articles at present manufactured.*

Name and description of article.	Annual output.	Present duty.	Proposed bounty or duty.
1			
2			
3			
4			

(*b*) *Articles which it is proposed to manufacture.*

Name and description of article.	Estimated annual output.	Present duty.	Proposed bounty or duty.
1			
2			
3			
4			

It will then be necessary for you to indicate briefly how you have arrived at the amount of bounty or duty proposed in each case. The c.i.f. price of each imported article which competes with your products should also be furnished, the sources in regard to this information being indicated.

4. I am to state that your representatives will be examined, as desired by you, at Shillong at 10 A.M. on Monday, the 17th of May, and that it would be convenient if your reply to this letter (with 6 spare copies) was received by the Board at least four days before that date. Please number the paragraphs of all future written representations you may make to the Board. Reference to particular points or passages becomes very difficult when the paragraphs of a representation are not numbered.

(4) *Letter, dated 12th May 1926, from the Hukumchand Electric Steel Works.*

We beg to acknowledge, with thanks, receipt of your letter No. 190 of the 5th instant and also of your letter No. 205 of the 7th instant and have pleasure in replying as follows:—

The bulk of the information called for in your letter No. 198 has been supplied in our letter of May 4th. We note, however, the recapitulatory information contained therein in order to put it into the form required by the Board.

STEEL CASTINGS.

YEAR ENDING MARCH 31ST, 1925.

Total Finished Output . . Cwts. 13,740.

			Rs.	A.	P.
(1) *Works Costs*—					
Materials, Scrap, Refractories, Fluxes, Stores, etc.	For details see Statement "A" attached.		1,39,799	2	6
Less Scrap recovered			6,870	0	0
		Nett Total	1,32,929	2	6

			Rs.	A.	P.	Rs.	A.	P.
(2) *Cost over Materials*—								
Power			67,576	7	4			
Fuel			13,913	14	3			
Repairs and Relining, etc., included in General Works Costs—								
	Labour		1,21,249	10	3			
General Works—Supervision:—								
	European		21,688	3	3			
	Indian		5,951	10	0	2,30,379	13	1
		Total				3,63,308	15	7
Nett cost per cwt. of output			26	8	6			

(3) *Overhead Charges*—

	Rs.	A.	P.	
(*a*) Depreciation	60,429	11	3	See Statement "C".
(*b*) Interest on Working Capital	28,188	0	0	" " "D".
(*c*) Head Office Charges	52,614	12	0	" " "E".
Total	1,41,232	7	3	
Cost per cwt. of output	10	4	5	
Works Cost	26	8	6	
Overhead Charges	10	4	5	
Total Production Cost	36	12	11	

NOTE.—(*a*) *Depreciation*.—This was shown in our letter to the Board of the 4th instant, calculated at 6½ per cent. as we understood that the Board's considered opinion was that that percentage was correct for a Steel Manufacturing concern. In view of the Board's letter No. 198 of the 5th instant we prefer to take the sums as allowed by our annual accounts as being in our opinion more adequate in view of the large amount of electrical machinery in our concern.

(4) We estimate that the replacement value at the present ruling prices for the whole block would be approximately 60 per cent. of the original value.

(5) *Working Capital*.—This has been shown in detail in Statement "D". There is no fixed working Capital as this is provided by the Proprietors as and when required.

	Rs.	A.	P.
(6) *Manufacturer's Profit*.—On 31st March 1925, we had invested in the business	14,74,904	0	0
Less accumulated loss	2,49,073	0	0
Total	12,25,831	0	0
We consider that on the above amount a return of 12 per cent. can be justified which amounts to	1,47,100	0	0
Less Interest on working Capital	28,188	0	0
Total	1,18,912	0	0

(7) Our production costs for the year ended March 31st, 1926, are almost complete and will be forwarded within a day or two. Otherwise they will be handed to the Board when our representatives present themselves for oral examination on the 17th instant.

(8) *Bounty asked for on Steel Castings*.—We have asked for a bounty of Rs. 10 per cwt. on Steel Castings subject to periodical reduction until it is altogether extinguished. The reduction in costs which can be attained each year depends mainly on output and if our output continues to increase at the same rate as for the past 4 years, we should be producing about 3 times our present tonnage at the end of 5 years. If this can be accomplished, we anticipate a reduction in costs of Rs. 2 per cwt. per year and possibly more. We therefore suggest that the bounty should be reduced by Rs. 2 per year until it is finally extinguished. Alternatively we suggest that our costs of production shall be periodically examined by the Board and the amount of the bounty fixed for a given period according to the reduction in costs which can be shown.

SPRING STEEL.

1. (*a*) Our estimated cost of production has been shown in detail on page 3 of our letter of May 4th and for Liquid Steel in our production cost sheets for year ending March 31st, 1925.

(*b*) The block value of the rolling Mill required by us is difficult to estimate. The Mill forms part of the entire plant and equipment of Messrs. Indian Steels, Ltd., a firm which went into liquidation some time ago. The entire assets of this concern were acquired by us practically at scrap value and in consequence of advantageous sales of that portion of the plant which we do not require, we are in a position to hand over the Rolling Mills to our Steel works at a purely nominal price. The cost of erecting the buildings, furnaces and rolling mills, etc., is estimated at Rs. 2,00,000 and this we propose to take as the Block Value of the plant.

(*c*) The Mill we have acquired is of the same size and type as that being operated at Ishapore and we anticipate that our costs will approximate very closely the Ishapore costs. Materials, Labour, Power, Supervision, etc., should be approximately the same as the Mills are situated in the same district within a few miles of each other.

2. (*a*) The results of all the tests carried out in connection with Spring Steel Manufacture are being forwarded to you under separate cover.

(*b*) The Ishapore charges for rolling were Rs. 3-4 per cwt. for Light Sections and Rs. 3 for Heavy Sections. The charges were fixed after a special test had been made at the factory during which careful account was kept of expenditure of Power, Fuel, Labour, Supervision, plus overhead charges, etc. The test was carried out to determine what their production costs would be if they should require to produce Spring Steel on a commercial basis. We supplied to the Superintendent of the factory for a detailed rolling cost sheet, but he replied that he was unable to furnish this without the authority of the Government of India. No doubt he would be ready to place the information at the disposal of the Board if asked officially by them to do so.

3. *Spring Steel Sections at present manufactured by us.*

Description.	Annual output.	Present duty.	Proposed duty or bounty.
(*a*) Flat Steel of all sizes for Laminated Springs, from 5″ wide down to ½″ wide.	No figures are available as to annual output as we have only just entered upon the commercial stage of this manufacture. We anticipate that we could meet the demand of the whole of India with ease.	Per cent. 10	Per cent. 33⅓
(*b*) Round Spring Steel for Spiral Springs, any diameter from ¼″ upwards.	.....	10	33⅓
(*c*) Square Spring Steel for Spiral Springs, any size from ½″ square upwards.	.....	10	33⅓

As stated in our letter of May 4th, the lowest imported price of Spring Steel with which we have had to compete is Rs. 9 per cwt. This price was given to us by Messrs. Burn & Co., Howrah, as the price actually paid by them for a quantity ordered by them for Wagon Springs.

4. *Rolled Steel articles which it is proposed to manufacture.*

Description.	Estimated annual output.	Present duty.	Proposed duty.
(*a*) Carbon Steel for Mining Tools, Octagon, Hexagon, Ovals, etc.	Depends entirely on the demand which, according to the Customs returns, amounts to approximately Tons 1,000 per annum. Our Rolling Mills could meet this demand in addition to the Spring Steel demand with ease.	...	We do not propose to ask for a bounty or increased import duty on these articles as their manufacture is not likely to reach the commercial stage for at least two years.
(*b*) Carbon Steel for Smiths' Tools, Chisels, Drills, Hammers, Squares, Rounds, Flats and Ovals.	...	...	...
(*c*) Carbon Tool Steels for Engineers' Tools, Squares, Rounds and Flats.	...	...	..

STATEMENT A.

Particulars	April 1904.	May.	June.	July.	August.	September.	October.	November.	December.	January 1905.	February.	March.	Value Cwt. Qr. Lbs.	Rate.	Amount.	April 1904.	May.	June.	July.	August.	September.	Total.	Value.	Amount.
			Weights Pounds.																			Finished Liquid Steel—		Orig. qr. Cw.
"Long."																						Ibs. q. r.		£704 1 0
Steel Ingot Manufacturer	350 0 0	370 0 0	360 0 0	330 0 0	360 0 0	337 0 0	335 0 0	320 0 0	330 0 0	337 0 0	308 0 0	360 0 0	2,371 0 0 / 296 0 0	20 0 0 ton	2,371 0 0 / 296 0 0	320 0 0	-	320 0 0	344 0 0	320 0 0	320 0 0	3,360 0 0	20 0 0 ton	2,360 0 0
Steel Rolled [ ]	1,200 0 0	1,250 0 0	1,200 0 0	1,110 0 0	1,220 0 0	480 0 0	520 0 0	600 0 0	560 0 0	600 0 0	1,040 0 0	1,200 0 0	11,180 0 0	10 0 0 ton	5,590 0 0	1,020 0 0	1,400 0 0	1,400 0 0	1,320 0 0	1,320 0 0	1,320 0 0	14,000 0 0	10 0 0 ton	7,000 0 0
Finished Axles	60 0 0	60 0 0	60 0 0	60 0 0	60 0 0	60 0 0	60 0 0	60 0 0	60 0 0	60 0 0	60 0 0	60 0 0	720 0 0	0 0 0 ton	0 0 0	60 0 0	-	60 0 0	60 0 0	60 0 0	60 0 0	720 0 0	0 0 0 ton	0 0 0
Tyre Steel	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	600 0 0	0 0 0 ton	0 0 0	50 0 0	-	50 0 0	50 0 0	50 0 0	50 0 0	600 0 0	0 0 0 ton	0 0 0
Axle Steel	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	600 0 0	0 0 0 ton	0 0 0	50 0 0	-	50 0 0	50 0 0	50 0 0	50 0 0	600 0 0	0 0 0 ton	0 0 0
Abrasives	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 24 0	0 0 0 ton	0 0 0	0 2 0	-	0 2 0	0 2 0	0 2 0	0 2 0	0 24 0	0 0 0 ton	0 0 0
"Sundries."																								
Firebricks	100 0 0	100 0 0	200 0 0	170 0 0	100 0 0	60 0 0	100 0 0	200 0 0	150 0 0	60 0 0	100 0 0	100 0 0	1,350 0 0	15 0 0 ton	1,350 0 0	60 0 0	-	60 0 0	60 0 0	60 0 0	60 0 0	900 0 0	15 0 0 ton	900 0 0
Coke	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	600 0 0	0 0 0 ton	0 0 0	50 0 0	-	50 0 0	50 0 0	50 0 0	50 0 0	600 0 0	0 0 0 ton	0 0 0
Blacksmiths	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0 ton	0 0 0	0 0 0	-	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0 ton	0 0 0
Engine	2 0 0	2 0 0	2 0 0	2 0 0	2 0 0	2 0 0	2 0 0	2 0 0	2 0 0	2 0 0	2 0 0	2 0 0	24 0 0	0 0 0 ton	0 0 0	2 0 0	-	2 0 0	2 0 0	2 0 0	2 0 0	24 0 0	0 0 0 ton	0 0 0
"Shipping Stores."																								
Iron Ore	25 0 0	25 0 0	25 0 0	0 0 0	0 0 0	-	-	-	-	-	-	-	75 0 0	15 0 0 ton	56 5 0	-	-	-	-	-	-	56 5 0	15 0 0 ton	56 7 0
Anthracite	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0	12 0 0	0 0 0 ton	0 0 0	1 0 0	-	1 0 0	1 0 0	1 0 0	1 0 0	12 0 0	0 0 0 ton	0 0 0
Fire Bars	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0 ton	0 0 0	0 0 0	-	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0 ton	0 0 0
Stores, Waggon and Waiter	No. 200	No. 200	No. 200	No. 200	No. 200	No. 200	No. 200	No. 200	No. 200	No. 200	No. 200	No. 200	No. 2,400	1 0 0 each	2,400 0 0	No. 200	No. 200	No. 200	No. 200	No. 200	No. 200	No. 2,400	1 0 0 each	1,200 0 0
Miscellaneous Stores	750 0 0	750 0 0	750 0 0	750 0 0	750 0 0	750 0 0	750 0 0	750 0 0	750 0 0	750 0 0	750 0 0	750 0 0	9,000 0 0	1 0 0 ton	9,000 0 0	750 0 0	-	750 0 0	750 0 0	750 0 0	750 0 0	9,000 0 0	1 0 0 ton	9,000 0 0
Distilling Companies	3,500 0 0	4,000 0 0	3,500 0 0	3,000 0 0	3,500 0 0	3,000 0 0	3,500 0 0	3,000 0 0	3,500 0 0	3,000 0 0	3,500 0 0	3,500 0 0	41,000 0 0	10 0 0 ton	20 10 0 ton	3,500 0 0	3,000 0 0	3,000 0 0	3,000 0 0	3,000 0 0	3,000 0 0	36,000 0 0	10 0 0 ton	18,000 0 0
Miscellaneous Stores	200 0 0	200 0 0	200 0 0	200 0 0	200 0 0	200 0 0	200 0 0	200 0 0	200 0 0	200 0 0	200 0 0	200 0 0	2,400 0 0	1 0 0 ton	1,200 0 0	200 0 0	-	200 0 0	200 0 0	200 0 0	200 0 0	2,400 0 0	1 0 0 ton	1,200 0 0
Stores Engineer Shop	600 0 0	600 0 0	600 0 0	600 0 0	600 0 0	600 0 0	600 0 0	600 0 0	600 0 0	600 0 0	600 0 0	600 0 0	7,200 0 0	1 0 0 ton	3,600 0 0	600 0 0	-	600 0 0	600 0 0	600 0 0	600 0 0	7,200 0 0	1 0 0 ton	3,600 0 0
Stores Welding Department	1,500 0 0	1,500 0 0	1,500 0 0	1,400 0 0	1,500 0 0	1,500 0 0	1,500 0 0	1,500 0 0	1,500 0 0	1,500 0 0	1,500 0 0	1,500 0 0	18,000 0 0	1 0 0 ton	9,000 0 0	1,500 0 0	1,500 0 0	1,500 0 0	1,500 0 0	1,500 0 0	1,500 0 0	18,000 0 0	1 0 0 ton	9,000 0 0
Stores Tubular Shop Department	150 0 0	150 0 0	150 0 0	150 0 0	150 0 0	150 0 0	150 0 0	150 0 0	150 0 0	150 0 0	150 0 0	150 0 0	1,800 0 0	1 0 0 ton	900 0 0	150 0 0	150 0 0	150 0 0	150 0 0	150 0 0	150 0 0	1,800 0 0	1 0 0 ton	900 0 0
																								Amount brought forward.
															7,20,221 0 0									10,704 1 0

Total Weight—Finished Castings—Cwts. 31,750 0 0

Less credit for scrap ingots etc. 6,550 0 0

Net cost of Materials £6,15,671 0 0

Total Weight—Finished Castings—Cwts. 4,750 0 0

Less credit for scrap materials 1,250 0 0

Net cost of Materials £3,50,000 0 0

STATEMENT B.

Particulars.	April 1904.	May.	June.	July.	August.	September.	October.	November.	December.	January 1905.	February.	March.	Total.	Rate.	Amount.	April 1904.	May.	June.	July.	August.	September.	Total.	Rate.	Amount.
							Total Finished Castings			Carry up To	Cost of Materials				Rs. a. p.									Rs. a. p.
Kirloskar Oriental	3,633 0 0	3,693 0 0	4,500 0 0	3,693 0 0	4,693 0 0	3,693 0 0	3,693 0 0	3,693 0 0	3,693 0 0	33,760 0 0	3,693 0 0	3,693 0 0	1,25,693 0 0	...	1,25,693 0 0	...	...	...	3,693 1 10	...	...	...	3,693 1 10
Horse Cart	1,333 0 0	2,146 0 0	2,146 0 0	1,947 0 0	2,146 0 0	2,146 0 0	2,146 0 0	2,146 0 0	2,146 0 0	19,320 0 0	2,146 0 0	2,146 0 0	72,931 0 0	10 per cent.	7,293 1 0	1,333 0 0	2,146 0 0	2,146 0 0	1,947 0 0	2,146 0 0	2,146 0 0	19,320 0 0	10 per cent.	1,932 0 0
Steel Gate	198 0 0	198 0 0	198 0 0	198 0 0	198 0 0	198 0 0	198 0 0	198 0 0	198 0 0	1,782 0 0	198 0 0	198 0 0	6,534 0 0	10 ...	653 4 0	198 0 0	198 0 0	198 0 0	198 0 0	198 0 0	198 0 0	1,782 0 0	10 ...	178 2 0
Gas Grate	74 0 0	81 0 0	74 0 0	74 0 0	148 0 0	81 0 0	81 0 0	148 0 0	148 0 0	962 0 0	148 0 0	74 0 0	1,495 0 0	10 ...	1,495 0 0	...	...	...	...	...	...	...	...	...
Magnetic Bricks	...	30 pcs.	30 pcs.	...	6 pcs.	...	300 pcs.	...	150 pcs.	150 pcs.	...	150 pcs.	600 pcs.	Rs. 400	2 0 0	...	...	...	...	150 pcs.	150 pcs.	300 pcs.	1 inch	200 12 0
Brick Bricks	1	200 ...	200 ...	75 pcs.	25 ...	...	300 ...	...	300 ...	300 ...	...	1,000 ...	2,201 ...	50 per 100	1,100 8 0	...	...	...	...	300 pcs.	300 ...	1,200 ...	50 per 100	600 0 0
Fire Clay	31 0 0	31 0 0	31 0 0	31 0 0	...	304 0 0	31 0 0	62 0 0	124 0 0	124 0 0	62 0 0	62 0 0	806 0 0	10 Mds.	1,007 8 0	31 0 0	31 0 0	31 0 0	31 0 0	62 0 0	62 0 0	248 0 0	10 Mds.	124 0 0
Miscellaneous Stores	300 0 0	300 0 0	300 0 0	300 0 0	300 0 0	300 0 0	372 0 0	300 0 0	300 0 0	2,772 0 0	300 0 0	300 0 0	5,172 0 0	...	10,000 0 0	300 0 0	300 0 0	300 0 0	300 0 0	372 0 0	300 0 0	2,772 0 0	...	4,000 0 0
															2,34,000 0 0									
General Works Supervision.																								
Pigeons	2,000 0 0	2,000 0 0	2,000 0 0	2,000 0 0	2,000 0 0	2,000 0 0	2,000 0 0	2,000 0 0	2,000 0 0	18,000 0 0	2,000 0 0	2,000 0 0	46,000 0 0	...	23,000 0 0	2,000 0 0	2,000 0 0	2,000 0 0	2,000 0 0	2,000 0 0	2,000 0 0	18,000 0 0	...	2,000 0 0
Indian	833 0 0	833 0 0	833 0 0	833 0 0	833 0 0	833 0 0	833 0 0	833 0 0	833 0 0	7,497 0 0	833 0 0	833 0 0	19,161 0 0	...	9,581 0 0	833 0 0	833 0 0	833 0 0	833 0 0	833 0 0	833 0 0	7,497 0 0	...	833 0 0
Workmen Wages	6,000 0 0	10,000 0 0	6,000 0 0	6,000 0 0	6,000 0 0	6,000 0 0	6,000 0 0	6,000 0 0	6,000 0 0	54,000 0 0	6,000 0 0	6,000 0 0	1,38,000 0 0	...	69,000 0 0	6,000 0 0	6,000 0 0	6,000 0 0	6,000 0 0	6,000 0 0	6,000 0 0	54,000 0 0	...	6,000 0 0
															1,38,000 0 0									
														Iron Foundry	7,000 0 0									
															2,45,000 0 0									2,45,000 0 0

	Carry up To
Total Finished Castings	33,760 0 0
Total Cost	Rs. 2,45,000 0 0
Net Works Cost per cwt.	10 0 0

	Carry up To
Total Finished Castings	6,534 1 10
Total Cost	Rs. 1,38,000 0 0
Net Works Cost per cwt.	10 0 0

HUKUMCHAND ELECTRIC STEEL WORKS.

STATEMENT "C"—DEPRECIATION.

Year.	Land.	Buildings 2½ per cent.		Plant and Machinery, etc., 7½ per cent.		Total Amount.	
		Expenditure.	Depreciation.	Expenditure.	Depreciation.	Expenditure.	Depreciation.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
March 1920 to March 1923	33,077 9 0	1,28,684 7 0	4,650 15 4	5,53,682 3 6	...	7,15,644 3 6	...
March 1924 . . .	...	57,153 2 5		1,87,803 3 10	34,282 10 10	2,44,956 6 3	38,933 10 2
March 1925 . . .	...	27,677 7 0	5,116 13 2	20,898 3 0	55,312 14 1	48,575 10 0	60,429 11 3
September 1925 . .	...	10,616 2 6	2,804 2	13,492 8 10	35,583 1 9	24,109 11 4	38,387 3 11
	33,077 9 0	2,24,331 2 11	12,571 14 8	7,75,877 3 2	1,25,178 10 8	10,33,285 15 1	1,37,759 0 4

N 2

HUKUMCHAND ELECTRIC STEEL WORKS.

STATEMENT "D"—INTEREST.

Year.	Capital actually invested and increased yearly.	Total.	Block Capital after deducting depreciation.	Interest charged on Block Capital at 6 per cent.	Interest on working Capital.	Total amount of interest charged.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
March 1920 to March 1923	9,96,921 8 6	...	...	...	...	...
Increased up to March 1924.	1,94,708 12 11	11,91,630 5 5	...	29,907 10 0	4,773 6 0	34,681 0 0
Increased up to March 1925.	1,67,089 14 8	13,58,720 4 1	8,88,589 0 0	53,315 5 0	28,188 0 0	81,503 5 0
Decreased up to September 1925.	66,022 5 2	12,92,697 14 11	8,80,735 0 0	26,422 10 6	15,982 14 9	42,405 9 3
	...	...	...	1,09,645 9 6	48,944 4 9	1,58,589 14 3

HUKUMCHAND ELECTRIC STEEL WORKS.

STATEMENT "E"—HEAD OFFICE CHARGES.

Year.	Supervision.			Management.			Commission.	Total.		
	Rs.	A.	P.	Rs.	A.	P.		Rs.	A.	P.
March 1920 to March 1923.	45,381	0	0	38,438	2	0	*nil*	83,819	2	0
March 1924 . .	18,000	0	0	35,381	13	7	„	53,381	13	7
March 1925 . .	18,000	0	0	34,614	12	0	„	52,614	12	0
September 1925 .	9,000	0	0	20,897	9	7	„	29,897	9	7
	90,381	0	0	1,29,332	5	2		2,19,713	5	2

HUKUMCHAND ELECTRIC STEEL WORKS, BALLYGUNGE.

Cost Account for twelve months from April 1924 to March 1925.

PARTICULARS.	Weight.	Cost per Cwt.	Amount.	PRODUCTION.	Weight.	Cost per Cwt.	Amount.
	Cwt. qr. lb.	Rs. A. P.	Rs. A. P.	**Liquid Steel.**	Cwt. qr. lb.	Rs. A. P.	Rs. A. P.
Stores Issued . . .	20,610 0 0	2 2 4	44,235 1 3	Steel produced (estimated).	20,610 0 0	5 13 0	1,20,030 2 4
Electricity Consumed . .	..	2 7 4	50,721 0 7				
European Establishment .	...	0 11 9	15,150 0 0				
Do. Bonus . .	...	0 2 4	3,062 7 0				
Indian Establishment .	...	..	...				
Worker's Wages . .	...	0 5 3	6,861 0 6				
Repairs	...	...	...				
TOTAL .	20,610 0 0	5 13 0	1,20,030 2 4	TOTAL .	20,610 0 0	5 13 0	1,20,030 2 4
Liquid Steel as above .	20,610 0 0	...	1,20,030 2 4	**Moulding Shop.**			
Stores Issued . . .	..	4 9 7	63,259 14 9	Recoveries 33⅓ per cent.	6,870 0 0	1 0 0	6,870 0 0
European Establishment .	...	0 4 0	3,475 12 3	Transfer to machine shop .	13,740 0 0	20 5 7	2,79,612 5 4
Indian Do. .	...	0 5 2	4,451 10 0				
Moulder's Wages . .	...	6 8 6	90,023 4 3				
Patternshop Stores .	...	0 2 0	1,660 0 0				
Do. Wages .	...	0 4 2	3,581 9 9				
TOTAL .	20,610 0 0	...	2,86,482 5 4	TOTAL .	20,610 0 0	21 5 7	2,86,482 5 4

							Machine Shop.				
Moulding Shop as above	13,740	0	0	20	5	7	2,79,612	5	4	Challans for the month	...	...	
Stock from	...			...			...			Closing Stock	...	...	
Work in outside shop	...			...			...						
Establishment	...			1	8	0	1,500	0	0				
Stores Machine Shop	...			0	9	8	8,357	2	3				
Wages, Do.	...			1	3	11	17,054	1	6				
Stores, Welding	...			1	10	6	22,692	0	0				
Wages, Do.	...			0	2	10	2,483	15	3				
Electricity Consumed	...			1	3	8	16,854	13	9				
Repairs	...			0	15	9	13,515	15	6				
TOTAL WORKS COST	13,740	0	0	26	5	7	3,62,070	5	7		...	...	...
Head Office Establishment.										By Gross Profit brought down.	...	...	...
										By Gross Profit on Iron Foundry.	...	...	...
Overhead charges	13,740	0	0	3	13	3	52,614	12	0				
TOTAL	13,740	0	0	30	2	10	4,14,625	1	7				

HUKUMCHAND ELECTRIC STEEL WORKS, BALLYGUNGE.

Cost Account for twelve months from April 1924 to March 1925—contd.

PARTICULARS.	Weight.	Cost per Cwt.	Amount.	PRODUCTION.	Weight.	Cost per Cwt.	Amount.
	Cwt. qr. lb.	Rs. A. P.	Rs. A. P.		Cwt. qr. lb.	Rs. A. P.	Rs. A. P.
Contingencies, General charges, Rent and Taxes, Travelling expenses, Motor Car expenses, Insurance, Commission allowance.	...	...	...				
Repairs, Electricshop . .	...	...	...				
Indian Establishment .	...	...	...				
Stores	...	...	...				
Worker's Wages . . .	...	...	...				
Repairs, Smithyshop . .	...	...	...				
Stores	...	...	...				
Worker's Wages . .	...	...	...				
Laboratory Charges . .	...	...	...				
Indian Establishment .	..	...	...				
Stores	...	...	...				
Delivery, Freight, Law, Telephone, Printing and Stationery, Postage and Telegram, Advertising charges, etc.	...	...	...				

Ballygunge Office and Foundry Establishment.	...	...	...
Depreciation 6¼ per cent.	13,740 0 0	4 0 6	55,437 8 0
Net Profit	...	...	...
	13,740 0 0	34 3 4	4,70,122 9 7

Iron Foundry.

Stores	...	Boxes (Moulding) made	
Worker's Wages	...		
Gross Profit	...		

Accountant.

F. C. WILLIAMS,
Manager.

(5) *Letter, dated 12th May 1926, from the Hukumchand Electric Steel Works.*

Further to our letter of yesterday's date, we beg to send you herewith results of tests, etc. of our Spring Steel.

1. *Chemical Analysis.*—The British Standard Specification No. 24, Part 3, 1921, requires that the steel must show on analysis not more than 0·8 per cent. nor less than ·05 per cent of Carbon, not more than ·05 per cent. of Sulphur and Phosphorus. The following are the analysis of 6 separate heats of our Steel :—

Heat No.	Carbon.	Manganese.	Silicon.	Sulphur.	Phosphorus.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
1475	·64	·86	·20	·021	·014
1698	·61	·86	·21	·024	·021
1701	·66	·84	·22	·017	·017
1707	·57	·84	·32	·019	·019
1712	·59	·90	·29	·018	·026
1717	·66	·83	·16	·022	·025

The above analysis were carried out in our own Works Laboratory. Confirmatory Tests were made by the Government Test House, Alipore, and the Metal and Steel Factory, Ishapore, as follows :—

Heat No. 1473.

——	Carbon.	Manganese.	Silicon.	Sulphur.	Phosphorus.
Hukumchand Electric Steel Works.	·57	·85	·19	·022	·012
Government Test House .	·57	·86	·22	·021	·021
Ishapore . . .	·64	·86	·20	·021	·014

Tensile Test.—The British Standard Specification does not call for a Tensile Test, but some Railway Engineers insist upon it. The following results were obtained :—

	Yield Point Tons per Sq. In.	Break Tons per Sq. In.	Elongation per cent.
Government Test House . .	26·11	51·87	15
Metal and Steel Factory, Ishapore	28·55	53·30	16·50

Cambering Test.—This was carried out at Ishapore as the Government Test House have no facilities for this test.

The results were correct to British Standard Specification Report No. 24, Spec. No. 6b—1921.

Practical Tests.—These were carried out by the Deputy Chief Mechanical Engineer, East Indian Railway, Lilooah, and the Loco. and Carriage Superintendent, Eastern Bengal Railway, Kanchrapara.

At Lilooah a complete wagon spring was made up from our flat steel $4'' \times \frac{1}{2}''$ section. This was put through the ordinary compression and cambering tests alongside a similar spring made from British steel. The results were equal in both cases.

Subsequently the spring made from our steel was subjected to 500 Ten Ton blows and still retained its original camber.

At Kanchrapara *two* complete springs were made up for Bogie underframes. These were likewise tested alongside British springs. The results were equally satisfactory and the springs are now in service.

Both the East Indian Railway and the Eastern Bengal Railway are now fully satisfied that the quality of our spring steel is equal to the imported British article and they are placing regular orders with us.

Other important railways have also been asked to try out our spring steel and we are confident that in a very short time we shall convince all the first class Railways that we can produce such steel equal in quality to any in the world.

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(6) *Letter, dated the 13th May 1926, from The Hukumchand Steel Works, Calcutta.*

Replying to yours of the 10th instant, I received your two wires yesterday and replied by wire that our production costs up to March 31st, 1926, were being prepared. I expect to have them ready to-morrow and will forward them at once. Also that we were including labour as a sub-heading made "Cost over Materials."

2. In our production cost sheets we take the figure for finished output at $\frac{2}{3}$rd of the liquid steel used as we find from experience that this approximates very closely to the actual sales. The balance $\frac{1}{3}$rd represents risers and headers, which are necessary to the manufacture, and wasters. During 1924-25 our production cost, completed on the $\frac{2}{3}$rd basis, showed that we produced cwts. 13,740 of castings. Our actual deliveries for the same period were cwts. 13,838. A difference of cwts. 98 only.

In 1925-26 our production cost showed cwts. 14,122 produced and cwts. 12,916 delivered. The difference here, *viz.*, cwts. 1,106 is greater, but is explained by the fact that we had issued cwts. 1,178 off finished castings to Messrs. Burn & Co., for machining and these could not be delivered until machining was completed.

3. I am sorry that complete cost sheets from the date on which we started are not available. During 1922 and 1923 the works were very much in the experimental stage and output was so small that production costs were of little or no value. It was not until 1924 that a proper system of cost accounting was introduced and we are giving you for comparison our costs for 1924-25 and 1925-26.

4. I propose to leave for Shillong on Saturday next arriving on Sunday 16th and have to-day wired you to this effect. If you think it advisable for me to come a day earlier I should be glad if you let me know by wire. If necessary I shall be able to stay an extra day in order to provide time for the informal discussion with the President which you suggest.

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(7) *Letter, dated the 13th May 1926, from The Hukumchand Electric Steel Works, Calcutta.*

We have pleasure in sending you herewith our production costs sheets for the year ending March 31st, 1926, in the form required by you. As desired, we send you six copies of each statement. We trust the statements sent con-

tain all the information you require. Any further details will be supplied by our representatives when they present themselves for examination on the 17th instant.

Enclosure I.

STEEL CASTINGS.

Production Cost—Year ended March 31st, 1926.

Total Finished Output Cwts. 14,122.

1. Works Costs

	Rs.	A.	P.
Materials as per Statement "A"	1,24,293	6	0
Less—Scrap recovered	7,129	0	0
NETT TOTAL	1,17,164	6	0

2. Cost over Materials—

	Rs.	A.	P.	Rs.	A.	P.
Power	65,888	4	9			
Fuel	19,468	6	9			
Repairs and Relining included in general cost—						
Labour	1,12,309	10	9			
General Works Supervision—						
European	12,517	7	9			
Indian	7,114	6	0			
				2,17,298	4	0
				3,34,462	10	0
Nett cost per cwt. of output				25	10	10

3. Overhead Charges—

	Rs.	A.	P.	
(*a*) Depreciation	48,468	15	3	See Statement "C"
(*b*) Interest on working Capital	46,708	4	9	,, ,, "D"
(*c*) Head Office Charges	59,148	4	10	,, ,, "E"
	1,54,325	8	10	
Cost per cwt.				Rs. 10-14-10.

	Rs.	A.	P.
Works Cost	23	10	0
Overhead Charges	10	14	10
Total Production Cost	34	8	10

Enclosure II.

HUKUMCHAND ELECTRIC STEEL WORKS, BALLYGUNGE.

Cost Account for twelve months from April 1925 to March 1926.

Particulars.	Weight.	Cost per Cwt.	Amount.	Production.	Weight	Cost per Cwt.	Amount.
	Cwt. qr. lb.	Rs. A. P.	Rs. A. P.		Cwt. qr. lb.	Rs. A. P.	Rs. A. P.
Stores Issued	21,181 3 23	...	43,681 0 9	Liquid Steel—			
Electricity Consumed	...	...	49,416 5 3	Steel Produced (estimated)	21,181 3 23	...	1,13,319 9 3
European Establishment	...	...	12,517 7 9				
,, Bonus	...	...					
Indian Establishment	...	...	810 0 0				
Worker's Wages	...	...	6,894 11 6				
Repairs	...	...	...		21,181 3 23	...	1,13,319 9 3
	21,181 3 23	...	1,13,319 9 3				
Liquid Steel as above	21,181 3 23	...	1,13,319 9 3	Moulding-Shop—			
Stores Issued	...	...	59,643 1 0	Recoveries 33⅓ %	7,059 3 11	...	7,059 15 0
European Establishment	...	...	...	Transfer to Machineshop	14,122 0 12	....	2,65,757 14 6
Indian ,,	...	...	5,374 6 0				
Moulder's Wages	...	...	85,650 5 6				
Patternshop Stores	...	...	2,328 1 3				
,, Wages	...	...	6,502 6 6				
	21,181 3 23	...	2,72,817 13 6		21,181 3 23	..	

HUKUMCHAND ELECTRIC STEEL WORKS, BALLYGUNGE—*contd.*

Cost Account for twelve months from April 1925 to March 1926—contd.

Particulars.	Weight.	Cost per Cwt.	Amount.	Production.	Weight.	Cost per Cwt.	Amount.
	Cwt. qr. lb.	Rs. A. P.	Rs. A. P.		Cwt. qr. lb.	Rs. A. P.	Rs. A. P.
Moulding Shop as above	14,122 0 12	...	2,65,757 14 6				
Stock-from	...	..	...	Machineshop—			
Work in outside shop	...	...	13,555 7 6	Challans for the month	...	...	...
Establishment	...	...	...	Closing Stock	..	...	...
Stores Machineshop	...	...	8,220 12 9				
Wages ,,	...	...	9,881 15 9				
Stores Welding	...	...	4,935 12 9				
Wages ,,	...		4,310 3 6				
Electricity Consumed	...	..	16,471 15 6				
Repairs	...	..	11,301 8 9				
Total Works Cost	14,122 0 12	23 10 10	3,34,435 11 0				
					...	...	...
Head Office Establishment.							
Overhead Charges	14,122 0 12	4 5 1	61,004 1 7				
	14.122 0 12	27 15 11	3,95,439 12 7	By Gross Profit brought down	...	...	...
				,, ,, on Iron Foundry	...	...	...
Contingencies, General charges, Rent and Taxes, Travelling expenses, Motor Car expenses, Insurance, Commission allowance.	...	...	...				
Repairs Electricshop	...	...	...				
Indian Establishment	...	...	...				
Stores	...	...	...				
Worker's Wages	...	...	...				
Repairs, Smithyshop	...	...	...				

Stores	...			...			...					
Worker's Wages	...			...			...					
Laboratory Charges	...			...			...					
Indian Establishment	...			...			...					
Stores	...			...			...					
Delivery, Freight, Law, Telephone, Printing and Stationery, Postage and Telegram Advertising Charges, etc.	...			...			...					
Ballygunge Office and Foundry Establishment.	...			...			...					
Depreciation 6¼%	14,122	0	12	4	4	8	60,595	11	0			
NETT PROFIT	14,122	0	12	32	4	7	4,56,035	7	7	...	...	...

IRON FOUNDRY.

Stores	...									Boxes (Moulding) made	...	
Worker's Wages	...											
Gross Profit	...											
	...										...	

F. G. WILLIAMS,

Manager.

STATEMENT A.

Hukumchand Electric Steel Works.

Description.	October 1925.	November 1925.	December 1925.	January 1926.	February 1926.	March 1926.	Total.	Rate.	Amount.
Scrap.				Produced liquid steel—11,423-2-5.					Rs. A. P.
Miscelllaneous, Heavy	576 0 0	483 0 0	540 0 0	614 1 14	478 0 0	635 0 0	3,326 1 14	20 0 0 ton	3,326 6 0
Borings	1,159 0 0	848 0 0	932 0 0	1,205 0 0	935 0 0	1,271 0 0	6,350 0 0 ,,	13 0 0 ,,	4,127 8 0
Foundry	700 0 0	470 0 0	565 0 0	440 0 0	390 0 0	520 0 0	3,085 0 0	20 0 0 ,,	3,085 0 0
Ferro Manganese	25 2 1	12 3 18	14 8 12	21 2 7	13 2 11	16 3 6	105 1 19	200 0 0 ,,	1,054 3 0
,, Silicon	14 0 0	6 0 8	10 3 4	18 0 0	9 0 0	15 3 0	73 2 12	22 13 0 cwt.	1,674 9 0
Aluminium	0 3 18	0 0 24	0 2 5	0 2 4	0 1 21	0 3 10	3 2 4	94 0 0 ,,	332 5 9
Refractories									
Dolomite—Raw	180 0 0	200 0 0	120 0 0	180 0 0	120 0 0	240 0 0	1,040 0 0	13 8 0 ton	702 0 0
Lime, Unslaked	136 0 0	98 0 0	112 0 0	120 0 0	100 0 0	134 0 0	700 0 0	120 0 0 md.	1,147 3 0
Electrodes	9 2 22	8 0 22	5 1 26	8 1 20	8 1 19	7 3 2	47 3 27	0 9 6 lb.	3,191 6 6
Nipples	18 0 0	19 0 0	15 0 0	13 0 0	15 0 0	18 pcs.	93 pcs.	3 4 0 oz.	304 12 0
Iron Ore	8 0 6	7 1 8	8 3 20	2 1 18	3 3 10	9 0 12	39 2 18	10 0 0 ton	31 11 3
Anthracite	14 0 0	13 3 14	10 3 10	16 3 9	13 1 23	15 1 17	84 1 17	4 0 0 cwt.	357 9 9
Fluorspar	8 2 0	6 1 20	3 0 22	6 0 11	9 0 6	10 1 20	43 2 23	85 0 0 ton	203 10 0
Stopper Nozzles Sleeves	320 pcs.	260 0 0	300 pcs.	280 pcs.	250 0 0	345 0 0	1,755 pcs.	1 0 0 oz.	1,755 0 0
Miscellaneous	500 9 9	490 8 0	512 6 0	520 10 0	501 0 0	494 8 0	3,019 9 9	...	3,019 9 9
									24,292 14 0
Moulding Composite	3,902 0 0	3,413 0 0	3,362 0 0	3,488 0 0	2,840 0 0	3,164 0 0	16,669 0 0	16 0 0 ton	14,235 3 0
Miscellaneous Stores	1,316 8 0	1,325 0 0	1,222 0 0	1,213 9 0	1,214 0 0	1,209 0 0	7,900 8 0	...	7,400 8 0
Machine Shop Stores	901 1 0	529 12 3	656 5 9	651 0 0	636 12 0	547 13 9	3,922 12 9	...	3,922 12 9
Welding Stores	351 15 0	152 14 6	308 12 0	365 11 0	504 2 0	354 10 0	2,018 0 6	...	2,018 0 6
Pattern Stores	154 7 3	216 6 3	356 0 3	286 1 0	172 2 3	142 1 0	1,327 2 0	...	1,327 2 0
									53,196 8 3
								Less—Credit for Scrap recoveries	3,807 0 0
								Carried over—Nett cost of materials	49,389 8 3

STATEMENT B.

Hukumchand Electric Steel Works.

Description.	October 1925.	November 1925.	December 1925.	January 1926.	February 1926.	March 1926.	Total.	Rate.	Amount.
		Total finished steel produced—7,615-2-22						Brought forward	Rs. a. p. 49,389 8 3
Electric Current	5,876 2 9	5,820 5 9	4,962 5 6	5,704 2 0	5,701 5 6	6,146 0 0	34,210 5 6	...	34,210 5 6
Steam Coal	3,041 0 0	2,763 0 0	3,328 0 0	3,033 0 0	3,459 0 0	2,753 0 0	18,577 0 0	11 ton.	10,107 5 6
Hard Coke	95 0 0	101 0 0	114 0 0	91 0 0	129 0 0	178 0 0	708 0 0	18 ,,	673 3 3
Gas Coke	...	...	...	...	...	8 0 0	8 0 0	20 ,,	8 0 0
Magnesite Bricks	...	6 pcs.	83 pcs.	...	...	...	89 0 0	1 oz.	89 0 0
Silica Bricks	...	549 ,,	674 ,,	...	407 0 0	745 0 0	2,375 0 0	32 per cent.	760 0 0
Fire Clay	38 0 0	21 0 0	20 0 0	23 0 0	9 0 0	19 0 0	130 0 0	30 ton.	195 0 0
Miscellaneous Stores	2,015 0 0	2,112 10 0	2,104 6 0	2,001 9 6	1,998 7 0	1,782 0 0	12,014 14 0	...	12,014 14 0
European Establishment	1,072 13 9	1,096 12 0	1,114 9 0	1,127 6 0	1,101 6 6	1,536 5 0	7,049 4 3	...	7,049 4 3
Indian Establishment	710 0 0	695 0 0	695 0 0	630 0 0	630 0 0	630 0 0	3,890 0 0	...	3,990 0 0
Workers' Wages	9,537 11 9	8,718 6 6	9,826 5 9	10,683 13 9	8,559 6 0	9,725 0 0	57,051 5 9	...	57,051 5 9
Total	...	...	...	..	...	...	...	...	1,75,501 14 6

	Cwt. qr. lbs.
Total Finished Castings	7,615 2 22
Total Cost	Rs. 1,75,501-14-6.
Nett Works Cost	,, 23-0-9.

STATEMENT C.

Hukumchand Electric Steel Works.

Year.	Building Expenditure.	2½ per cent. Depreciation.	Plant and Machinery Expenditure.	7½ per cent. Depreciation.	Total Expenditure.	Total Depreciation.	Remarks.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
March 1925 . . .	2,13,715 0 5	9,767 12 6	7,62,383 10 4	89,595 8 11	10,09,176 3 9	99,363 5 5	
to September 1925 . .	10,616 2 6	...	13,493 8 10	...	24,109 11 4	...	
March 1926 . . .	32,731 7 0	6,426 8 9	11,627 12 11	59,062 14 0	44,359 3 11	65,489 6 9	
	2,57,062 9 11	16,194 5 8	7,87,505 0 1	1,48,658 6 11	10,77,645 3 0	1,64,352 12 2	
Land	33,077 9 0	...	...	...	...	...	

STATEMENT D.

Hukumchand Electric Steel Works.

Year.	Capital actually invested and increased or decreased yearly.	Total.	Block Capital after deducting depreciation.	Interest charged on block Capital at 6 per cent.	Interest on Working Capital.	Total amount of Interest charged.	Remarks.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Increased up to March 1925.	.....	13,58,720 4 1	8,88,589 0 0	53,315 5 0	28,188 0 0	81,503 5 0	
Decreased up to September 1925.	66,022 5 2	12,92,697 14 11	8,80,735 0 0	26,422 10 6	15,982 14 9	42,405 9 3	
Up to March 1926	22,384 5 8	12,70,313 9 3	9,12,792 6 10	38,109 6 0	10,725 6 0	40,834 12 3	
Total	.....	.....	.....	1,17,847 5 6	54,896 4 9	1,72,743 10 6	

STATEMENT E.

Hukumchand Electric Steel Works.

Year.	Supervision.	Management.	Commission.	Total.	Remarks.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
September 1925	9,000 0 0	20,897 9 7	...	29,897 9 7	
March 1926	9,000 0 0	20,250 11 3	...	29,250 11 3	
Total .	1,8000 0 0	41,148 4 10	...	59,148 4 10	

(8) *Statements handed by the Hukumchand Electric Steel Works on the 19th May 1926.*

(*a*)—Statement of Outturn 1924-25 and 1925-26.

		Cwts.			Cwts.
1924 April 1	Stock in hand	2,533	1924 April 1 to March 31st.	Sales	13,798
	Liquid steel produced in 12 months.	20,610		Shortage 33·46 per cent.	6,897
		23,143		Stock	2,448
					23,143
1925 April 1	Stock in hand	2,448	1925 April 1 to 1926 March 31st.	Sales	12,916
	Liquid steel produced	21,182		Shortage 36·67 per cent.	7,769
		23,630		Stock	2,945
					23,630

Statement of average price realised.

Year ended.	Sales.	Realised.	Average Price.
	Cwts.	Rs.	Rs. A. P.
31st March 1925	13,798	484,018	35 2 0 per cwt.
31st March 1926	12,916	391,203	30 4 0 ,,

(b)—Statement "C"—Depreciation.

Half year ended	Land.	Buildings.		Plant and machinery.		Electric furnaces.		Electric equipment.		Total amount.	
	Expenditure.	Expenditure.	Depreciation.	Expenditure.	Depreciation.	Expenditure.	Depreciation.	Expenditure.	Depreciation.	Expenditure.	Depreciation.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
March 1920 to March 1923.	32,076 9 0	1,28,884 7 0	...	1,58,826 7 9	...	2,94,677 6 1	...	1,00,178 5 8	...	7,14,643 3 6	...
30th September 1923.	...	50,546 10 11	...	59,624 3 11	...	90,644 14 10	...	30,364 12 0	...	2,31,178 9 8	...
31st March 1924	...	6,606 7 6	4,650 15 4	4,842 11 3	8,373 7 2	2,197 2 0	19,375 15 6	131 7 10	6,533 4	13,777 12 7	38,933 10 2
30th September 1924.	...	9,588 8 0	2,445 5 2	2,639 11 0	8,472 6 7	...	8,687 15 9	733 7 0	3,285 3 4	12,961 10 0	22,890 14 10
31st March 1925	...	18,088 15 0	2,671 8 0	17,525 1 0	8,958 0 9	...	19,375 15 6	...	6,533 4 2	35,614 0 0	37,538 12 5
30th September 1925.	...	10,616 2 6	2,804 2 3	13,493 8 10	9,636 12 0	...	19,375 15 6	...	6,570 6 3	24,109 11 4	38,387 3 11
31st March 1926	...	32,731 7 0	3,622 6 7	11,627 12 11	10,506 9 4	...	9,687 15 9	...	3,285 3 2	44,359 3 11	27,102 2 10
Total	32,076 9 0	2,57,062 9 11	16,194 5 3	2,68,577 8 8	45,947 3 10	3,87,519 6 11	76,503 14 0	1,31,408 0 6	26,207 5 1	10,76,644 3 0	1,64,852 12

(9) *Letter from the Hukumchand Electric Steel Works, dated the 14th June 1926.*

With reference to the oral examination of Messrs. Williams and Smith, we have the honour to give you the supplementary information required by the Board in the course of the oral examination.

Question 1.—The price of steel scrap borings and turnings in the competing countries.

Answer.—£3-0-0 to £3-5-0 f.o.b. (see telegram attached with translation).

Question 2.—Weight of castings incorporated in a standard locomotive and average price per cwt.

Answer.—Tons 16·05 Price not mentioned (see original letter from Peninsular Locomotive Company, Limited).

Question 3.—Production totals and price realised from 1st April 1922.

Answer.—

——	Production.	Average price realised.
	Cwt. qrs. lbs.	Rs.
1922-23	2,231 3 14	44
1923-24	8,049 1 27	36
1924-25	13,713 0 0	35
1925-26	13,413 0 0	30

Question 4.—Actual selling price.

Answer.—See question 3.

Question 5.—Works costs 1923-23, 1923-24.

Answer.—

Year.	Total production.	Total expenditure excluding depreciation and interest.
	Cwt. qrs. lbs.	Rs.
1922-23	2,231 3 14	No data.
1923-24	8,049 1 27	3,70,733 3 10

Question 6.—Present prices of steel castings in England.

Answer.—£1-9-6 f.o.b. (see telegram attached as answer to question No. 1).

Question 7.—Prices of spring steel landed in Calcutta.

Answer.—Jessop and Company quote for Edgar Allen's spring steel Rs. 10-7-0 including duty and profit. We have been unable to obtain actual *data* of landed cost price without profit of merchant.

Question 8.—Details of flat rate for supply of castings to Great Indian Peninsula Railway.

Answer.—*Great Indian Peninsula Railway.*—Our first trial order from this railway was carried out in May 1923. The Railway in their letter

No. M. S. W.-381/34, dated 9th May 1923 informed us that the castings were entirely satisfactory and that repeat orders would follow. From that time until July 1925 orders were received at rates varying from Rs. 36 to Rs. 40 per cwt., the total value being approximately Rs. 40,000. Since August 1925, we have been receiving regular orders at a flat rate of Rs. 38 per cwt. for all classes of castings. No tenders are invited for these castings and the orders are placed with us automatically. In September last year our Manager visited Bombay and made arrangements for all Great Indian Peninsula Railway patterns to be retained and kept in repair at our works. This was done to avoid loss of time when ordering and our Manager was informed that regular orders would continue to be placed with us at the flat rate of Rs. 38 per cwt. The Great Indian Peninsula Railway have kept their word and we have executed order for them to the total value of Rs. 40,000 during the past 9 months. No written Contract has been entered into.

Question 9.—Cost per unit of Electric Power from 1922 uptodate.

Answer.—

	Per unit. Rs. A. P.
Year ending March 1923	0 1 3
Year ending March 1924	0 1 3
Year ending March 1925	0 1 0
Year ending March 1926	0 0 11

Question 10.—Figure showing actual sales and stocks.

Answer.—See attached slip.

Question 11.—Actual weight of castings for each year 1924-25, 1925-26.

Answer.—

	1924-25. March. Cwt. qrs. lbs.	1925-26. March. Cwt. qrs. lbs.
Saleable	13,713 0 0	13,413 0 0
Wasters	No separate account kept.	728 1 8
Risers	6,647 0 17	7,040 0 11

Question 12.—Reasons for fluctuations in expenditure of miscellaneous stores under moulding.

Answer.—On enquiry we find that the amount of miscellaneous stores on moulding account was wrongly charged in stores machine shop during the half-year April to September 1925. The correct debit should be:—

	Moulding Shop. Rs. A. P.	Machine Shop. Rs. A. P.
April	414 0 6	1,107 6 0
May	466 11 0	1,848 11 6
June	590 4 3	1,070 14 0
July	577 1 6	995 13 6
August	399 15 0	1,226 8 3
September . . .	287 2 9	1,832 0 6

Question 13.—Figures for output for each financial year similar to those given for Calendar year.

Answer.—The figures are as follows:—

	Cwts.
Year ending March 1923	1,337
Year ending March 1924	6,410
Year ending March 1925	13,798
Year ending March 1926	12,916

Enclosure I.

HUKUMCHAND ELECTRIC STEEL WORKS.

Statement of outturn 1922 to 1926.

(Answer to question 10.)

1923—April 1st, Stock in hand .	...			Sales . .	1,337	2	15
Liquid steel produced	4,463	3	0	Shortage 50% .	2,231	3	14
				Stock . .	894	0	27
	4,463	3	0		4,463	3	0
1924—April 1st, Stock in hand .	894	0	27	Sales . .	6,410	2	26
Liquid steel produced	12,110	1	0	Shortage 33·5% .	4,060	3	1
				Stock . .	2,533	0	0
	13,004	1	27		13,004	1	27
1925—April 1st, Stock in hand .	2,533	0	0	Sales . .	13,798	0	0
Liquid steel produced	20,610	0	0	Shortage 33·4% .	6,897	0	0
				Stock . .	2,448	0	0
	23,143	0	0		23,143	0	0
1926—April 1st, Stock in hand .	2,448	0	0	Sales . .	12,916	0	0
Liquid steel produced	21,182	0	0	Shortage 36·67%	7,769	0	0
				Stock . .	2,945	0	0
	23,630	0	0		23,630	0	0

Enclosure II.

Copy of a telegram from Dundee to the Hukumchand Electric Steel Works, dated the 2nd June 1926.

Referring to telegram 22nd—Continental Scrap—Approximately £3 to £3-5 per ton. f.o.b. English—Casting same as last—£1-9-6.

Enclosure III.

Copy of letter, dated the 25th May 1926, from the Peninsular Locomotive Company, Limited, to the Hukumchand Electric Steel Works.

We acknowledge your letter, dated 22nd May 1926. We have received a questionnaire from the Tariff Board, to which we are sending a reply mentioning in detail every locomotive part. In the meanwhile for your information we may say that for the 2-8-0 type locomotive, very common on Indian railways the total weight of steel castings is 16·05 tons.

Our Works Manager reports as follows:—

> "If we could obtain satisfactory service from Hukumchand we could purchase from them, otherwise, we are afraid we should have to import from England."

While the output of our Works in locomotive is estimated at two hundred, it is not likely that we shall handle more than one hundred locomotives a year for some time to come. If your work is certified as correct by the Indian Stores Department and reported on well by the railways, we should, therefore, be offering you a market of anything from one thousand to two thousand tons a year.

We still await from you fuller particulars of any locomotive castings that you have made for any of the local railways and prices, which you have charged, to enable us to compare and prepare a programme for the future and we have offered in our last letter to you to give you our fullest co-operation provided your output is acceptable to the railways through the inspection of the Indian Stores Department.

P. S.—For your guidance we send herewith a list of steel castings used in the 2-8-0 type of locomotive and tender and shall be glad if you will let us know which of these you have so far done for any railway or workshop in India.

Enclosure IV.

Schedule of steel castings on 2-8-0 type locomotive and tender.

1 Fire Door.
1 Frame Hind Drag Casting.
1 Frame Stretcher (Leading and Inter).
1 Frame Stretcher (Inter).
8 Horn Plate Clips.
1 Frame Stretcher (Front of Firebox).
2 Slide Bar Brackets.
4 Platform Supports.
2 Piston Body.
2 R. H. and 2 L. H. Reversing Link Carriers.
2 Wheel Centres (Driving).
4 Wheel Centres (Leading and Trailing).

2 Wheel Centres (Intermediate).
6 Axle-boxes (2 L., 2 D. and 2 T.).
2 R. H. and L. H. Hornblocks.
8 Axle-box Guides.
2 Spring Beam Carriers.
2 Spring Beam Carriers.
6 Brackets for Springs.
1 Cross Stretcher between Frames of Truck.
2 Bogie Wheel Centres.
1 Pony Truck Axle-box.
1 Pivot of Radial Arm (Pony Truck).
1 Front Drag Box Casting.
6 Tender Wheel Centres.
4 Tank Supports.
4 Fuel Rack Supports.
1 Drawhook Guide.

(10) *Letter from the Hukumchand Electric Steel Works, dated the 4th August 1926.*

In reply to your letter No. 577 of the 30th ultimo with reference to the oral evidence of our representatives, *vide* pages 29 and 30 of the evidence, we have carefully considered the matter of our price for large quantities of castings which may be offered by the Wagon Building firms.

We are prepared to make the following offer for the manufacture of cast steel component parts for wagons and underframes.

If the amount offered is

500 tons per annum . . .	Rs. 31 per cwt.	F.o.r., Calcutta.
1,000 tons per annum . . .	Rs. 30 ,,	
2,000 tons per annum . . .	Rs. 29 ,,	

The prices quoted are for rough castings unmachined with risers and headers removed.

We are prepared to abide by these terms for three years but should the wagon building firms desire to revise these prices year by year we must reserve a similar right to ourselves.

(11) *Letter from the Hukumchand Electric Steel Works, Calcutta, dated the 28th December 1926.*

With reference to Mr. Mather's visit to our works on the 20th instant, we beg to forward herewith a copy of a letter received from the Agent, Calcutta Electric Supply Corporation, Limited, showing the reduction possible in the price per unit of H. T. Current supplied to us in the event of both our steel furnaces working to full capacity, 24 hours per day. In making their calculation the Supply Company have included for electric power required to drive our rolling mill and also for all auxiliary motors for driving machine shop and foundry plant. It will be noted that the price of current when working to full capacity would be reduced to approximately half the present rate, *viz.*, ·46 anna per unit. We have the assurance of the Supply Company's Agent that after making due allowance for all contingencies the rate would not exceed ·50 anna per unit.

2. *Depreciation and interest on Rolling Mill Plant, etc.*—We confirm Mr. William's statement that as the whole of our mill plant and buildings, with the exception of the motor, were purchased at practically scrap rates we do not propose to charge either depreciation or interest on any of this plant except perhaps on such sum as represents the cost of erection.

3. *Extra supervision required.*—We anticipate that the following extra staff would be required to efficiently supervise the full working of furnaces and mills.

	Rs.	
1. One extra European Steel Melter on .	600	per month.
2. One Rolling Mill Foreman on . . .	800	,, ,,
3. One Rolling Mill Assistant Foreman on .	500	,, ,,
TOTAL .	1,900	,, ,,

We are in complete agreement with Mr. Mather with regard to his suggestion to erect only the 16″ mill at the outset in order to reduce our actual out-of-pocket expenses to the absolute minimum.

We shall be happy to furnish you with any further information you may require on the subject.

COPY.

THE CALCUTTA ELECTRIC SUPPLY CORPORATION, LIMITED.

6, OLD POST OFFICE STREET,
Calcutta, 23rd December 1926.
No. B.-44943.

F. G. Williams, Esq.,
General Manager,
The Hukumchand Electric Steel Co.,
30, Clive Street, Calcutta.

DEAR SIR,

With reference to your call upon me this afternoon, I have pleasure in enclosing herewith particulars showing the amount payable at our present rates for a High Tension Supply, the Maximum Demand of which is 1570 K. W. and the working hours 7488 per annum. For the purpose of this calculation we have taken coal at Rs. 9 per ton and the Power Factor at unity.

Any further particulars you may desire, I shall be happy to furnish on hearing from you.

Yours faithfully,
Sd.
Agent.

COPY.

THE HUKUMCHAND ELECTRIC STEEL COMPANY.

	Rs.	A.	P.
1,570 K. W. at Rs. 55 per K. W. per annum	86,350	0	0
11,756,160 units at 5 annas per unit . .	367,380	0	0
	453,730	0	0

	Rs.	A.	P.			
Less Coal Rebate . .	88,171	3	3			
Less Power Factor Rebate .	27,553	2	0			
	115,724	5	3			
				115,724	5	3
				338,005	10	9

Price per unit ·46 of an anna.

(12) *Letter from the Hukumchand Electric Steel Works, dated 15th January 1927.*

As desired I send you herewith particulars of our output for the calendar year 1926:—

	Cwts.	qrs.	lbs.
Steel castings	7,708	3	19
Spring steel	1,002	1	22
"D" Class steel	125	0	11
TOTAL .	8,836	1	24

We also cast about 2,000 cwts. of spring steel ingots for stock bringing the total up to cwts. 10,836, qrs. 1, lbs. 24.

(13) *Letter from the Hukumchand Electric Steel Works, dated 18th January 1927.*

With reference to the questionnaires issued by the Tariff Board to the Railway Board, Railways and Wagon building firms regarding steel castings for locomotives, railway carriages and wagons (pages 289 to 344 of the printed applications; etc.), we beg to submit the following remarks:—

(1) *The Peninsular Locomotive Company.*—In their reply to question 9 this firm states that "This firm had not manufactured axle boxes for any other wagon manufacturer." This is incorrect and misleading. We have from time to time supplied small numbers of axle boxes to Messrs. Burn & Co., Ld. It is also well known to the Peninsular Locomotive Company that we have

supplied many thousands of axle boxes to railways, upwards of 15,000 of which passed through the machine shops of Messrs. Burn & Co. for machining.

On the one occasion on which we were asked by the above firm to quote for axle boxes (*viz.*, April 23rd, 1925) we quoted as follows:—

"For supplying I. R. C. A. Axle Boxes 10″×5″ Journal completely machined and fitted with face places, studs, nuts and dust shield cover plates, but not including metal bearings."

It is not unusual for suppliers of axle boxes to omit the metal bearings as these are usually supplied by non-ferrous metal foundries specializing in bearing metals. It is therefore misleading for the Peninsular Locomotive Company to state that "they desired to give only the unfinished castings."

(2) *Messrs. Burn & Co., Ld.*—(*a*) In their reply to question 2 they state "We understand, however, that certain kinds of sand have to be imported." This is incorrect. All moulding sands used by us are obtained locally and none are imported.

(*b*) In their reply to question 3 this firm states that "The manufacture of spring steel is handicapped by the fact that only basis pig is obtainable in India." This is not the case. In the first place no pig iron is used in our process, the original metallic charge consisting entirely of scrap. Secondly, we use the basic process for the manufacture of spring steel in all cases where the specification permits basic steel to be used, but the conversion of the hearth of our furnaces from basic to acid is a very simple matter. Ample raw material is available locally and the conversion could be made in a few days. It might in fact be necessary for us to work one acid and one basic furnace if we are to produce spring steel suitable for all specifications.

(*c*) *Question 9.*—The correspondence regarding this question of which copies have been sent to you by Messrs. Burn and Company is concerned with a single order for underframe castings. It has no reference to wagon castings. Our statement referred to the castings required for 3,200 wagons ordered from wagon building firms in India, the bulk of the order going to the Indian Standard Wagon Company of which firm Messrs. Burn & Co. are the Managing Agents.

We have frequently requested Messrs. Burn & Co. to give us the opportunity to quote for their requirements of axle boxes and the writer has frequently called on the directors at Howrah in order to discuss the subject. A copy of our letter of May 7th, 1925, is enclosed herewith for your information. No reply was received by us to this letter.

Our output of axle boxes in the early part of 1925 averaged 1,200 boxes per month, all of which were machined and fitted by Messrs. Burn & Co. in their Howrah shops. They are therefore fully aware of our capacity to meet their requirements in full.

(3) *The Madras and Southern Mahratta Railway Company.*—Replying to question Nos. 3 to 10 this Railway states "Castings not of such good quality as imported, deliveries most unsatisfactory." In this connection we give below the history of the only two orders we have so far carried out for the Madras and Southern Mahratta Railway:—

(*a*) Their order No. B. B. J. 9/23, dated 12th November 1925, received 17th November 1925 for compensating beam carriers and axle bar guides. Delivery promised in 4 to 5 weeks. Actual delivery made in 5 weeks.

(*b*) Order No. B. B. J. 15/2, dated 28th November 1925, received 1st December 1925 for spring stops. Delivery promised by 17th December 1925. Actual delivery made on 31st December 1925. Delay was due to late arrival of patterns from Madras.

(*c*) Order No. B. B. J. 18/25, dated 30th December 1925, received on 4th January 1926. No delivery date given. Castings required as early as possible.

As regards quality, our representative called on the Locomotive and Carriage Superintendent of the Madras and Southern Mahratta Railway in December 1926 and was informed that such castings of ours as had been machined and put into service were quite satisfactory and no complaint had been received regarding them.

We feel sure that the remarks regarding quality and delivery made by this Railway must refer to castings supplied from sources other than the Hukumchand Electric Steel Works.

We would invite the attention of the Board to the steady decline in prices realised by the sale of steel scrap from 1921 to 1926.

We note that the questionnaire does not appear to have been addressed to either the North Western, the Great Indian Peninsula, the Bengal Nagpur and East Indian Railways who are among our best customers.

We trust the foregoing remarks will receive the due consideration of the Board.

Enclosure.

Copy of letter, dated 7th May 1925, from Hukumchand Electric Steel Works, Calcutta, to Messrs. Burn and Company, Howrah.

Cast Steel Axle Boxes.

Further to our representative's interview with Mr. Shewell last week regarding supplies of Axle boxes to Messrs. Burn & Co., Howrah, and the Indian Standard Wagon Company, we beg to say that we have now practically completed all the orders on our books for axle box castings. We are therefore in a position to accept fresh orders up to a maximum of 1,500 boxes per month. We are prepared to accept orders for large numbers at the same price as those supplied by the Patent Axle Box Company, Wolverhampton. We are of course only able to quote for rough castings, without fittings or bearings but we presume you would be glad to have this work for your own machine shops. We have also approached Messrs. J. Stone and Company of 1, British Indian Street, regarding the supply of bearings. This firm state they would be happy to supply bearings for I. R. C. A. boxes up to any quantity. They would supply through us or direct to you as you prefer. If you would kindly let us know your latest price for complete boxes from the Patent Axle Box Company, we shall be pleased to meet you in the matter of price for unmachined and unfitted boxes.

As you are aware, we have latterly been delivering an average of 1,200 boxes monthly to the Oudh and Rohilkhand Railway and we should be quite ready to enter into a contract with you for the supply of all the boxes you require. We understand your demands amount to approximately 900 boxes per month. We would accept any reasonable penalty clause against failure to deliver in any agreement entered into. We may also say that you would have no anxiety regarding the correctness of any boxes supplied by us as they would all have to be accepted by the Controller of Inspection before leaving our works.

We trust you will kindly give this matter your consideration and trust we may be given an early opportunity to serve you in this matter.

Assuring you of our best attention at all times.

THE HUKUMCHAND ELECTRIC STEEL WORKS.

Evidence of Messrs. F. G. WILLIAMS and P. S. SMITH representing the Hukumchand Electric Steel Works, Calcutta, recorded at Shillong on Monday, the 17th May 1926.

President.—Mr. Williams, are you the General Manager or Works Manager of the Hukumchand Electric Steel Works?

Mr. Williams.—I am the General Manager.

President.—And Mr. Smith?

Mr. Smith.—I am the Auditor.

Mr. Noyce.—Are you a member of a recognised firm?

Mr. Smith.—I am a Chartered Accountant and my firm was Messrs. Norman, Hamilton and Company.

Mr. Noyce.—How long have you been connected with the Hukumchand Electric Steel Works?

Mr. Smith.—I audited the books of the Company in the beginning, but I was not called in until about two years after they had started.

President.—What do you mean by your not having been called in?

Mr. Smith.—To audit the accounts. When the construction was practically finished, I went and audited the accounts as best as I could.

Raw materials.

President.—First of all, we want to go into the question of raw materials. We examined that point in our first enquiry, but apparently as you are extending your works, it will now be necessary to review the position to that extent. What do you estimate the amount of the scrap available in the country at?

Mr. Williams.—I should put it round about 20,000 tons.

President.—20,000 tons in Calcutta or all over India?

Mr. Williams.—All over India. Probably half of that quantity would be available in Calcutta.

President.—Who would be the principal suppliers?

Mr. Williams.—The East Indian Railway, the Eastern Bengal Railway, people like Burn's and Jessop's and a large number of dealers in scrap who collect from all the places and store it and sell it in large quantities, in the country if they can, or export it.

President.—That 20,000 tons of scrap is the equivalent, I suppose, of about 18,000 tons of castings.

Mr. Williams.—Not so much as that.

President.—I mean, taking into account a wastage of 10 per cent.—It would be equivalent to 18,000 tons of liquid steel.

Mr. Williams.—That is correct.

President.—Out of 18,000 tons, how much do you estimate the quantity of borings at?

Mr. Williams.—It is very difficult to say, because we have not sounded all the sources. We have been buying nothing but borings.

President.—I see that you use practically about three-fifths borings now in your charge.

Mr. Williams.—We do and if we could, we should use nothing but borings.

President.—Have you tried to find out how much borings you will be able to get?

Mr. Williams.—No, we haven't. I have no figures to show you.

Mr. Smith.—We have not yet exhausted all the sources of supply.

Mr. Williams.—We have running contracts with the East Indian Railway, the Eastern Bengal Railway, the Bengal Nagpur Railway and the Calcutta Tramways.

President.—Up to now how much have you been able to secure in a year?

Mr. Williams.—Approximately 100 tons a month—that is what we have actually bought.

Dr. Matthai.—Is that all borings?

Mr. Williams.—Yes, turnings and borings.

President.—Then that covers practically all your requirements at the present moment.

Mr. Williams.—Yes. It has not been found necessary yet to search for other sources of supply, because all that we want we can get in Calcutta now.

President.—What about the tinplate shearings?

Mr. Williams.—It is quite suitable, but it is too expensive. Their price is, I think, in the neighbourhood of Rs. 30 to Rs. 35 a ton f.o.r. Tatanagar.

President.—Have you made enquiries recently?

Mr. Williams.—I have not made any enquiries recently, but they approached us some time ago.

President.—They have a considerable amount of this scrap which, I understood, they are exporting at present to Italy. They practically get very little for it—I don't know what it is. The position has very much changed, I think.

Mr. Williams.—It was probably a year ago they approached us.

President.—What is the average price that you pay for heavy scrap?

Mr. Williams.—We originally bought 1,000 tons of scrap at an average price of Rs. 35 per ton.

President.—What is the present market value? You say you charge your furnaces at Rs. 20 a ton.

Mr. Williams.—We wrote down the value of that, because the market fell. We can buy the same scrap at approximately Rs. 20 a ton. For that reason we wrote down the value of our stock to Rs. 20 a ton.

Mr. Smith.—We wrote that down in March 1925. In any case that was the market quotation. We have ourselves sold a certain amount of scrap at Rs. 20 a ton.

President.—May I take it that the price has dropped from Rs. 30 in 1923 to Rs. 20 a ton now?

Mr. Williams.—Yes.

President.—There has been a drop of Rs. 10 in the price of scrap. How much would it reduce the cost of production? I am not going into details at the present moment.

Mr. Smith.—About As. 10 a cwt.

President.—Is that price of Rs. 20 delivered at your works?

Mr. Williams.—Yes, delivered in our yard.

President.—Is it good enough to be put into the furnace or have you got to cut it up?

Mr. Williams.—It is in a form in which we can charge it direct.

President.—There must be some other kind of heavier scrap still available.

Mr. Williams.—There will be large quantities of much heavier stuff available in the country, but that is of no use to us, because it is too expensive to melt.

President.—Do I understand that this 20,000 tons of scrap you mentioned is the kind of scrap that is ready for use in the furnace?

Mr. Williams.—Yes.

President.—You have not given the prices of similar kinds of scrap in the competing countries.

Mr. Williams.—I can give them to you.

President.—I have got from the Iron and Coal Trades Review of 9th April 1926 the following prices. Perhaps, you may admit them to be more or less correct. Heavy scrap varies from 57*s.* to 72*s.*

Mr. Williams.—That will be about the price.

President.—And the turnings vary from 45*s.* to 57*s.*

Mr. Williams.—The latest price I have for heavy turnings is £2-7-6, that is according to the Foundry Trade Journal.

President.—I find in the Yorkshire scrap market they differentiate between the basic turnings for ordinary converters and electric furnaces and there is a difference of 4*s.* between the two. The latter is more expensive, why should it be?

Mr. Williams.—Probably the electric furnace manufacturers who use that class of scrap have got acid lined furnaces.

President.—You have got the basic lining in your furnace?

Mr. Williams.—Yes. Therefore we can use the inferior quality of scrap.

President.—Can you use only turnings without any heavy scrap?

Mr. Williams.—Yes, we can.

President.—Would that have the effect of reducing your electric current charges?

Mr. Williams.—It is much easier to melt.

President.—Would the furnace be able to hold that quantity?

Mr. Williams.—We should charge the furnace as much as it could hold.

President.—So it can be done.

Mr. Williams.—All electric furnaces are worked in that way. You cannot put two tons of turnings in a two ton furnace. You can probably put in one ton in the first instance and then as it gets ready, you can add more.

Mr. Smith.—We shall always have some heavy stuff which we can use.

Mr. Williams.—In future we are going to use nothing but turnings and borings which we can get at Rs. 10 a ton.

Mr. Noyce.—You can get sufficient borings. After all your outturn is only 50 tons a month. You can buy 100 tons of borings a month.

Mr. Williams.—We have got stocks of scrap to work off. We have got our own scrap in the form of headers and risers.

President.—Would it not be more economical just now to use these turnings and thus reduce your cost at a time when the competition is keener?

Mr. Williams.—If you could find a market for the scrap, that is very easy.

President.—You have stated in your representation that Indian scrap is being exported to Japan.

Mr. Williams.—It is in certain quantities, but there is more scrap available in the country than is exported.

President.—The price of scrap is very nearly equal to the price of pig iron. It is only a few shillings under.

Mr. Williams.—What is the price of pig iron?

President.—I couldn't tell you. But I should say that Cleveland pig iron, for instance, which is comparable to Tata's would probably be about £3-10-0. My point was this: if Japan can take our pig iron, why should it not take scrap at more or less pig iron price?

Mr. Williams.—Only, if there was a demand for scrap. They may have enough of their own without worrying to import it.

Dr. Matthai.—At present the credit for scrap is a mere book entry.

Mr. Williams.—It is based on what we consider as the market value.

Mr. Smith.—It is not a mere book entry. We are using it in the furnace and charging it at the price we take it in.

President.—As regards your own requirements of this raw material, it will depend upon your equipment and total production?

Mr. Williams.—Yes.

Furnaces and their capacities.

President.—You are equipped with two furnaces just now.

Mr. Williams.—Yes.

President.—The capacity of each furnace, I take it, is about 250 tons a month.

Mr. Williams.—It would give 6 heats a day.

President.—That is working 12 hours a day.

Mr. Williams.—That is 24 hours.

President.—In that case you would require three shifts. At present what are your working hours?

Mr. Williams.—Only one furnace and that works approximately 12 hours a day. We get 3 heats a day.

President.—Each heat is equivalent to 2 tons of liquid steel.

Mr. Williams.—Yes.

President.—I want to know your full capacity.

Mr. Williams.—I should not put it more than 12 tons of liquid steel—6 heats per day—that is working 24 hours a day for 25 days a month, it comes to 300 tons a month for a furnace.

Mr. Noyce.—Your total capacity is 600 tons a month now.

Mr. Williams.—Yes, I am talking of liquid steel only.

President.—If you are working both furnaces, there wouldn't be a stand-by in case of a break-down.

Mr. Williams.—No. In all my calculations I have taken 10 months in a year only, allowing two months for break-downs and repairs.

President.—Ordinarily how long is a furnace laid up for repairs in a year according to your calculations?

Mr. Williams.—Not more than 4 days for re-roofing, and 12 days for re-lining.

President.—I think we found in the steel enquiry that in order to have 6 furnaces working, they would probably require 7.

Mr. Williams.—Yes. In 1924 the furnace was completely relined and was re-roofed 8 times after that. It is the roof that goes most frequently, but the lining lasts a year.

President.—How many days does it take?

Mr. Williams.—It was re-roofed 8 times. It would probably take three days, that is to say, 24 days in a year. Relining would probably take a week.

President.—Have you made allowance for all that?

Mr. Williams.—I have allowed what I consider an ample allowance.

Mr. Noyce.—You have arrived at 600 tons a month on that basis.

Mr. Williams.—At 600 tons a month for ten months, we get 6,000 tons of liquid steel, *i.e.*, per year.

President.—You talk of extending your melting capacity. You say that you have bought some other furnaces.

Mr. Williams.—Three furnaces which we have acquired and are not erected are being held in reserve. They would be erected, if required.

President.—What is the capacity of those furnaces? Are they good serviceable furnaces?

Mr. Williams.—They are new furnaces and they have never been used.

President.—You say you have three other furnaces.

Mr. Williams.—Yes, two 3½ ton furnaces and one ½ ton.

Dr. Matthai.—That is nearly double.

Mr. Williams.—Very nearly.

President.—If they were all working, they would manufacture roughly up to 12,000 tons of liquid steel.

Mr. Williams.—Yes.

President.—In that case you would have exhausted nearly all the raw materials available.

Mr. Williams.—These furnaces were not bought with the immediate object of putting them in commission. They were bought as part of a big plant which was put up for sale by a company, which went into liquidation. We bought the whole plant and machinery which included these furnaces. It doesn't follow that we shall erect them all. It doesn't follow that we shall ever be in a position to want them. There they are if we should want them.

Mr. Noyce.—Have you included their value in your capital account?

Mr. Smith.—No. They are merely being held in reserve by the firm of Sir Sarupchand Hukumchand and Company. It is purely a speculation.

President.—Did you buy the first two furnaces, new or second-hand?

Mr Williams.—They were designed and built specially for us. They were not bought second-hand.

President.—Your whole equipment was new.

Mr. Williams.—Yes.

Electric smelting.

President.—As regards your having adopted this process of electric smelting, what was your idea?

Mr. Williams.—Do you mean from the point of view of cost?

President.—I should have thought that in this country where coal is reasonably cheap and easily available, it might have been more economical to have an ordinary basic converter. Would that not do?

Mr. Williams.—It would do.

President.—It is rather the more expensive of the two processes that you have adopted and I should like to know the reason for it.

Mr. Noyce.—Does not this process turn out a better class of castings?

Mr. Williams.—Yes, that is one reason. A very much better product is turned out by the electric furnace. A basic Bessemer process is an extremely difficult one to work and it would have taken a great many years to train Indians to use it. At that time I didn't consider the basic process very much, but I did consider the acid lining converter and I turned that down, because the raw material is not available in the country.

President.—I quite understand that.

Mr. Williams.—It would mean importing suitable pig iron and probably suitable coke for melting it.

President.—I think I have seen one of these furnaces at the works of Fairburn, Lawson, Coombe and Barbour and it seemed to work all right.

Mr. Williams.—Yes.

President.—As far as I know, there was no complaint about the quality of the castings.

Mr. Williams.—No. But I think there is good deal of difference, perhaps, not in the appearance but in the quality. The steel produced in an electric furnace is much sounder and much more homogeneous than anything you can produce out of a basic converter, because it is so much under control that you have time during the process to carry out routine tests of the samples which tell you exactly how the thing is progressing. In the Bessemer converter, whether it is acid or basic, the thing is all over in 20 minutes. It

is either good or bad according to the skill of the operator. There is nothing certain about it.

President.—I will come to that when we deal with the question of fuel consumption. Then as regards the other equipment, the important thing is the process of moulding, is it not?

Mr. Williams.—Yes.

President.—Is it different from cast iron moulding?

Mr. Williams.—There is a little difference. There is a difference in the materials we use.

President.—The moulding is the same, no matter what the materials you use are.

Mr. Williams.—For all practical purposes it is the same. A good iron moulder can very quickly become a good steel moulder.

President.—What I am trying to get at is you should not have much more wastage in your moulding department than in the cast iron foundries.

Mr. Williams.—I don't quite agree with you, because the temperature at which steel casting is done is so much higher that very slight differences in the mixing of the refractories might cause surface defects which do not appear in iron castings.

President.—Are not the defects more pronounced in heavier castings than in lighter ones?

Mr. Williams.—No. A heavier casting is a simpler proposition than a light one.

Risers and headers.

President.—As regards risers and headers, on which do you get most?

Mr. Williams.—More on the heavier castings than on the lighter ones.

President.—That is where a good deal of wastage comes in.

Mr. Williams.—It is a necessary wastage which cannot be avoided.

President.—All the cast iron castings are often very much heavier.

Mr. Williams.—Yes.

President.—So that as far as that part of the process is concerned, your workmen would have some experience.

Mr. Williams.—They would have no experience in deciding the condition of the heats or the size of them, because heavy iron casting does not require anything like the amount of heat—practically none at all—because contraction or shrinkage is more in the case of steel castings.

Power.

President.—Then as regards your power, is that a telescopic rate you have?

Mr. Williams.—Yes. The more power we take, the less it costs.

President.—What is the highest rate you pay?

Mr. Williams.—The highest rate we have paid is 1·25 annas per unit.

President.—How is it regulated?

Mr. Williams.—I don't think I can give you the figures, because I haven't them here.

Mr. Smith.—It is regulated month by month by the price of coal apart from the question of how much power we take.

President.—There are two principles applied. The first is the price of coal. As regards that, take its price for 1923.

Mr. Noyce.—Do you mean the price of coal supplied to the Calcutta Electric Supply Corporation?

Mr. Williams.—Yes.

President.—What was the price of coal in 1923?

Mr. Smith.—It was very high—something like Rs. 20 a ton.

President.—If that had been so, the steel works in the country would have closed down. They were, I think, paying Rs. 8 to Rs. 9 a ton f.o.r. colliery. What difference has the drop in the price of coal per unit made?

Mr. Williams.—In 1923, we were paying As. 1·25 per unit. That was due to the price of coal and to the small quantity of power that we were taking. Now it is ·91 of an anna. Occasionally it comes down to ·87 of an anna per unit but the average is ·91 of an anna. That, of course, is brought down by the larger quantity of power we are taking and the reduction in the price of coal.

President.—If you are working to full capacity, by which I mean 500 tons a month of liquid steel, what do you think it would come down to?

Mr. Williams.—I have the assurance of the Calcutta Electric Supply Corporation that if we could work even one furnace night and day, the price would come down to something under half an anna, because they would give us special rates when their load was light.

President.—How many units do you use for one ton of liquid steel?

Mr. Williams.—In 1924, we used 1,072 units per ton which included all our motors which are on the same meter.

President.—That is 5/6ths will be roughly smelting.

Mr. Williams.—Yes. In the year 1925, we used 1,020 units per ton which included all our shop motors, lighting, etc.

President.—Have you any figures for 1926?

Mr. Williams.—I have not got any figures for 1926.

President.—This would make a very big difference.

Mr. Williams.—Yes, it would bring down our power costs to a great extent. It would not be very much more than half of what it is now.

Mr. Smith.—You get increased efficiency by putting your scrap into a hot furnace instead of allowing it to cool. If we are working day and night, it would probably bring it under half, although the price wouldn't be half.

President.—As regards your other fuel, do you use coal?

Mr. Williams.—We use coal for our annealing furnace. We also use coke.

President.—Do you use coke as a flux?

Mr. Williams.—The coke we use is only for iron foundry coupler boxes.

President.—The quantity required is very small.

Mr. Williams.—Coal is a fairly heavy item, but not coke. We use very little coke.

Labour.

President.—As regards labour, how many Europeans have you got in the works?

Mr. Williams.—At present two besides myself.

President.—I suppose they attend to the furnace.

Mr. Williams.—One of them is more or less in general charge in my absence and the other one is in charge of the furnace. The headman is in charge of all the electric gear in the factory, motors, cranes, etc., and he also supervises the working of the furnace. He exercises a general supervision over the whole show.

President.—Will he be in charge of the works, when you go on leave?

Mr. Williams.—Yes.

President.—What is his name?

Mr. Williams.—Mr. Rose.

President.—Are you training any Indians to look after the furnace?

Mr. Williams.—We have one man coming on very well, who has been allowed to take charge of the furnace on two or three occasions for short periods. He can, in an emergency, make a simple casting heat, but we have not yet allowed him to take charge of the furnace for more than a day at a time. In another year or so, he will be able to take sole charge of the furnace.

President.—What do you mean by a simple casting heat?

Mr. Williams.—When we are making castings, that have not to be made according to the British Standard Specification for which a great deal more care has to be taken.

President.—Has he got to be a theoretical chemist at the same time?

Mr. Smith.—Not necessarily.

President.—Then how does he comply with the specifications?

Mr. Williams.—We have got a Works Chemist who analyses all the bath samples for him and tells him the percentages of manganese, carbon and so on from time to time and on that he makes the calculations for the additions that are required to bring it right.

President.—In that case any man ought to be able to do it who understands additions and calculations.

Mr. Williams.—That is just the point.

President.—We have sometimes been told that it is very difficult thing and that it will take 25 years and so on for an Indian to learn.

Mr. Williams.—I don't subscribe to that.

President.—Here in this case a chemist will advise him as to what to do.

Mr. Williams.—That is the simplest part of the whole business. The great difficulty that these learners have is in judging temperature and 5 out of 10, if they are left alone, melt down the furnace.

President.—Is there no instrument for measuring the temperature?

Mr. Williams.—I have never come across any instrument to measure the temperature. That is the principal difficulty in judging temperature.

President.—It is purely a matter of the eye then.

Mr. Williams.—It is purely a matter of the eye.

Dr. Matthai.—Where did this man get his experience?

Mr. Williams.—He learnt it entirely from us

Dr. Matthai.—He has been with you all along.

Mr. Williams.—He has been under our European smelting expert.

Dr. Matthai.—As what did he start in your works?

Mr. Williams.—He was not an apprentice, but he started straightway on the furnace, doing odd jobs.

President.—Does the other European look after the moulding shop?

Mr. Williams.—We have an Indian foreman moulder. We had rather an unhappy experience with the European foreman moulders. We had three altogether and two of them have turned out to be failures for various reasons, and the other left us.

President.—I see in 1925-26 the wages of Europeans were smaller.

Mr. Smith.—He was not an European but an Anglo-Indian. He is either an European or an Indian. He has got to be one or the other.

Principal classes of manufacture.

President.—Coming on to your principal classes of manufacture, I take it that they fall under two principal categories, *viz.*, railway castings and castings for general engineering.

Mr. Williams.—Those are the two main heads.

President.—I think in the first enquiry you said about 25 to 30 per cent. of your castings were for general engineering. Is that ratio still maintained?

Mr. Williams.—That is approximately what it is now.

President.—I think you would remember my asking you questions on this point in the first enquiry. I was suggesting to you then that these miscellaneous castings were so many in type and variety that it would be very difficult to devise any scheme of protection, assuming that protection was granted, which should cover all of them. Then I suggested that it would be

better if you excluded those from your proposals. Now you have again included them.

Mr. Smith.—We have only asked for bounties.

President.—That amounts to the same thing.

Mr. Williams.—I don't think we have mentioned them particularly.

General engineering castings.

President.—General engineering castings stand on a different footing altogether. A thing breaks down and it has got to be made here in this country and any man who is in need of it would give you more or less any reasonable price that you want. So the case for assistance in castings of this description is not the same as in the case of other castings, which can be ordered from abroad.

Mr. Williams.—Time is the essence.

President.—Most of your engineering castings are required for breakages or replacements.

Mr. Smith.—Not necessarily.

Mr. Williams.—There are exceptions.

President.—From what little I know about machinery, I think these castings are ordinarily required for breakages or urgent replacements.

Mr. Williams.—Generally speaking, yes.

President.—In that case, have you not got the customer at your mercy more or less in most cases?

Mr. Williams.—Unless he thinks the price is so high that he would put in a cast iron casting.

President.—More or less you can obtain a reasonable price. He cannot say he can import it. He must have the casting on the spot. Would it not be better to leave out of account these miscellaneous castings?

Mr. Williams.—I don't think it would make a vast difference as they are, that is to say, the grant of a bounty would only enable us to work up to full capacity. Leaving out the question of bounty if we should eventually work up our output to the full, the increase would not come from these miscellaneous castings. It would come from the railways in the form of castings made by mass production.

President.—I am coming to that presently. So far as these castings are concerned, really speaking, you cannot base a claim for any bounties on these, because, as I say, their prices are not governed at all by world prices.

Mr. Williams.—No.

Mr. Smith.—Most of this work which we do for Jessop's, for Burn's and for Parry's is stuff which they could easily bring out from Home and which they are taking for stock in many cases.

President.—It is no use overstating a case.

Mr. Smith.—I quite agree with you. But I don't feel that these important replacement castings make any very great portion of our business. A very large proportion of our miscellaneous castings, excluding the railways, goes to the light railway people and people such as Parry's for building those small colliery sidings and that is the stuff which they could compete with.

Mr. Williams.—Would it not be possible to include all those in one class and call them railway castings.

President.—I understood you to say in the first enquiry that at least 25 to 30 per cent. of your output were general engineering castings and the rest railway castings.

Mr. Williams.—Under railway castings I don't include anything which is used in making colliery tramway. If you include tramway castings under railway castings, by all means exclude the rest.

President.—What is the percentage of general engineering castings that are not of the usual type?

Mr. Williams.—I should put it at about 20 per cent.

Railway castings.

President.—Now as regards the railway castings I think you have given us a list before. I take it that axle boxes are the most important from your point of view.

Mr. Williams.—They are certainly the most numerous.

President.—As regards these repeat orders, where does the economy come in?

Mr. Williams.—To us?

President.—If an order is repeated, I take it that the cost of the pattern is the principal saving you can make.

Mr. Williams.—That is one reason.

Mr. Smith.—A very much more important reason is that we know when we are getting repetition orders, we can make it for stock.

President.—Leave that out for the moment. I am talking of the process now. What does a repetition order save you—that is what I want to know. Is it not merely the cost of the pattern?

Mr. Williams.—Yes, and putting it on the automatic machine.

President.—Each casting will have its own mould?

Mr. Williams.—Yes.

President.—Once you have got the pattern, a repetition order doesn't help you very much except indirectly as regards stocks and so on, which I am not talking of just now.

Mr. Williams.—The more experience we have of making a large number of these things.....

President.—I am not considering that just now.

Mr. Williams.—I don't quite follow your question.

President.—How much work does a repetition order enable you to save?

Mr. Williams.—I don't think it makes any difference except the cost of the pattern.

President.—That is what I want to know.

Mr. Williams.—Unless the numbers justify making a metal pattern.

President.—That refers to an order at a particular time. What I mean to say is that a repetition order will save you the cost of making the pattern chiefly. Now as regards the patterns, in many cases, patterns are supplied by the customers themselves?

Mr. Williams.—In a few cases, but not in many.

President.—These are made from specifications.

Mr. Williams.—They are made from drawings.

President.—Take the case of your engineering castings. Very often you get the patterns.

Mr. Williams.—About 50, 50. Sometimes they send it and sometimes they don't.

President.—As regards railway castings, you don't get patterns?

Mr. Williams.—In some cases we do and in some cases we don't. It all depends on how they ask us to quote. If they don't supply us with patterns, we make from their drawings.

President.—But the patterns do not come to very much.

Mr. Williams.—A set of axle boxes, if they are metal patterns, would probably cost Rs. 1,000, so that unless the order is fairly big, it makes considerable difference in the price per box.

Dr. Matthai.—Does it come to this, the mere fact that particular types of castings are standardised does not enable you to make saving, but what enables you to save is the largeness of the order?

Mr. Williams.—Yes.

President.—Would the position be different, if you had machine moulding?

Mr. Williams.—All axle boxes, and all that we call repetition work, are done on machines, but where each article is different in shape and size, it is not worth the trouble. It is impossible to do it on a machine.

President.—As regards axle boxes, how many types have you just now? You have supplied a considerable number of boxes in 1925.

Mr. Williams.—It was all one type in the case of the East Indian Railway. In the case of the Oudh and Rohilkhand Railway there were two types.

President.—How many types of axle boxes do you have to make?

Mr. Williams.—We make altogether 30 different types in small numbers.

President.—Are these for the bigger railways or the smaller railways?

Mr. Williams.—For the bigger railways, Eastern Bengal Railway, Bengal Nagpur Railway and the Madras and Southern Mahratta Railway. They have all got different types of axle boxes. They have only two types which are common to all, *viz.*, I. S. A. R. type and I. R. C. A. type.

President.—But the Railway Board have now adopted more or less the I. R. C. A. type.

Mr. Williams.—No. Each individual railway has its own ideas about the type it likes best. Some have a particular kind of case; some have a particular kind of cover and they differ considerably too in respect of shapings and bearings. I have never been able to understand why the Railway Board has not standardised axle boxes throughout India.

President.—There may be some difficulty about it I see. They may be able to do it as regards the new stock.

Mr. Williams.—Yes, as the old stock has become gradually obsolete.

President.—They have reduced the types of wagons. They have got now 8 or 9 types, I believe.

Mr. Williams.—That leads to standardisation eventually.

President.—Then as regards the other railway castings, is it possible to standardise them? Horn cheeks, can they really be standardised?

Mr. Williams.—They could do in the case of new stock, but nothing can be done as regards the existing stock.

President.—What is a horn cheek?

Mr. Williams.—It is part of a locomotive.

President.—What about spring hanger brackets?

Mr. Williams.—They are of a very different type.

President.—What about Head Stock Brackets?

Mr. Williams.—They are peculiar to the Eastern Bengal Railway.

President.—So far as these are concerned, it would be much more difficult to standardise them than the axle boxes.

Mr. Williams.—I don't think there would be any difficulty at all in new rolling stock. If we can standardise the axle boxes, why not the other components?

President.—As regards the weight of the axle box, may I take it that this is the normal weight of a broad gauge axle box, 2 qrs. 15 lbs.?

Mr. Williams.—This is for what they call $9\times4\frac{1}{2}$ box. There is the other box 10×5 which approximately weighs 80 to 84 lbs. That is the largest size. The other one is the intermediate size that is used in broad gauge lines.

President.—As regards the metre gauge, what is the weight of an axle box?

Mr. Williams.—In the metre gauge also they use $9\times4\frac{1}{2}$.

President.—Then the weight would be the same.

Mr. Williams.—Yes. They also use a still smaller size for light wagons $7\times3\frac{1}{2}$, but the bulk of them are $9\times4\frac{1}{2}$.

Dr. Matthai.—That weighs about 70 lbs.

Mr. Williams.—70 to 75 lbs. They vary according to the type.

President.—As regards these automatic couplers that you are talking about, you really don't know what the castings are going to be like.

Mr. Williams.—I do, I have seen them.

President.—They have not decided on the type yet.

Mr. Williams.—They are all very much alike and on the same principle and the weight of castings in each type is approximately the same.

President.—What do you estimate the weight at?

Mr. Williams.—It is approximately 1¼ cwts.

President.—That is for a set.

Mr. Williams.—That is for a pair.

Locomotive castings.

President.—Then as regards the locomotive castings, the Peninsular Locomotive Company have renewed their application for protection, but can you give us any idea of the weight of castings that a locomotive will require?

Mr. Williams.—I cannot give you that off-hand, but I shall send it to you.

President.—Have they asked you to quote?

Mr. Williams.—They have asked us to give them a list of all the loco. castings that we make and give them an idea about the price. They have led us to believe that it would not be very long before they would begin manufacture.

President.—I was trying to get some idea as to what you think would be the weight of castings in a locomotive? What do you think your market would be in that direction?

Mr. Williams.—It would probably run into 10 tons of castings for a locomotive.

Steel castings for Munitions Department.

President.—Then as regards the steel castings for the Munitions Department, do you seriously put forward that as an outlet for yourself?

Mr. Williams.—I do not know. We have been asked to quote by the Munitions people. We are already making castings for munitions. As regards the question of bombs, we had an enquiry from Ishapore.

President.—That may be merely to keep themselves informed of the possibilities of the country in the event of war. It may not be an enquiry for an actual order.

Mr. Williams.—They led us to believe that it would lead to something.

Spring steel.

President.—Taking the other aspect of your case, spring steel, you have not reached a stage when we can really expect you to give us much detail.

Mr. Williams.—No, because we do not roll ourselves. We can only give you our ingot price.

President.—What would be the principal form of your rolled steel?

Mr. Williams.—Chiefly flat steel for springs.

President.—That is spring steel?

Mr. Williams.—Yes.

President.—That will be used chiefly for railway stock.

Mr. Williams.—There are wagon springs, carriage springs and locomotive springs. There is also round steel for spiral springs and square steel for spiral springs which would be fitted into the buffer gear.

President.—Do you expect to make these?

Mr. Williams.—Yes, we are already doing that and selling it.

President.—Now we come to one of the most important points as regards the demand for castings. We estimated the demand for castings at 1,000 tons in our first enquiry.

Mr. Williams.—Yes, I remember that.

President.—You don't admit that figure as correct.

Mr. Williams.—No.

President.—I cannot really gather much from these figures as to what you think is going to be the ultimate demand. You must remember this that the Bombay, Baroda and Central India Railway in their workshops in 1923 manufactured 800 tons of railway castings and the East Indian Railway manufactured 200 tons.

Mr. Williams.—None of these East Indian Railway castings were incorporated in their rolling stocks.

President.—That is not the point. We shall come to that. What I meant was we excluded these and then we said that the demand was for 1,000 tons. As far as I can see, you are not able to show that there is a much bigger demand. First of all, take the total castings. Now supposing you are given an order for all the railway castings—at present, they build, I think, 3,500 wagons roughly in a year.

Mr. Williams.—That is new rolling stock.

President.—The weight is given as 7 cwts. including axle boxes.

Mr. Williams.—In the case of wagons yes, but not in the case of underframes. In the case of bogie underframes, it will be 26 cwts. excluding axle boxes.

President.—Let us take it in terms of wagons. As regards the wagons, (3,500 × 7 cwts.) it comes to about 1,000 tons, that is to say if you get all the orders.

Mr. Williams.—All the orders for new rolling stock.

President.—As regards old rolling stocks, we have not yet seen the report of the Expert Committee on railway workshops. I do not know what the report is. But assuming that they make their own castings in their own workshops, then in that case the demand is no greater than 1,000 tons.

Mr. Williams.—Assuming that all railways make their own castings for repairs and replacements. None of them do make castings largely. The only railway that does is the Bombay, Baroda and Central India. None of the others do and, as far as I know, have any intention of doing so. The Bombay, Baroda and Central India Railway make them for their own use and they don't sell to others.

President.—Here at page 2 of your printed representation you have got other railways to buy these castings. They come to about 7,000 cwts. in a year. On page 2 you have given the estimated requirements of the railways. I suppose those are the railways which do not make their castings.

Mr. Williams.—Except the Bombay, Baroda and Central India Railway.

President.—Let us take your figures. You have estimated the demand for axle boxes at 40,000.

Mr. Williams.—Yes.

President.—That is only about 1,000 tons, is it not?

Mr. Williams.—No, it is about 1,250 tons. That includes all replacements and new rolling stock.

President.—If you take the remainder in the same proportion, it may give you another 1,250 tons.

Mr. Williams.—Yes, in all 2,500 tons, that is if we get all the orders.

President.—Yes.

You cannot estimate the replacements of these other castings as you can of the axle boxes.

Mr. Williams.—We can't.

President.—You can say the life of an axle box is 20 years, but as regards the others, their whole life may be the life of a wagon which is about 40 years.

Mr. Williams.—Yes, in some cases, but not in all.

Other castings.

President.—As regards the other castings, I don't think that there can be a great demand for them.

Mr. Williams.—Do you mean for bogie underframes?

President.—I am not thinking of the new ones. As regards replacements of old castings which are used in the body of the wagon or the underframe, I don't think that much would be required. Their life would not be less than the life of the wagon, ordinarily speaking, though there may be breakages.

Mr. Williams.—You take these horn cheeks which are detachable pieces. The life of these is less than the axle boxes.

President.—Generally speaking?

Mr. Williams.—I think it applies to the majority of cases.

President.—Surely not.

Mr. Williams.—Yes, except such things as sole bar stiffening brackets which are put in to strengthen the wagon. Every one of these articles which we have mentioned here is subject to wear and therefore has to be replaced periodically.

President.—Of course if they are subjected to as much wear as axle boxes, there is a pretty big market.

Mr. Williams.—That is actually the case. All these things we have made are replacements due to wear and tear. The only parts that I can think of at the moment which are not subject to wear are the things that I have mentioned, *viz.*, sole bar stiffening brackets. The rest are all working parts —drawbar gear and such things—and they all wear out.

President.—We are only trying to ascertain what the position is.

Mr. Williams.—It would be very difficult to say in the absence of figures from the railways. We asked the railways, but they were very reluctant to give them.

President.—We also have asked for figures from the railways already. On the assumption that these railways do not manufacture their own castings, their requirements do not seem to be very heavy. In the case of four railways mentioned by you, you have said already that they do not manufacture their own castings.

Mr. Williams.—No.

Mr. Smith.—These (given on page 2) are only samples which we have taken out of what these railways have ordered from us. By no means do they represent the work which we have done.

President.—In a year you could not have done much more.

Mr. Smith.—Yes, much more. In the case of the Madras and Southern Mahratta Railway we have done work to the extent of over Rs. 20,000.

President.—The point is that at present you would not be able to supply more than 1,000 cwts. If you leave out 20 to 35 per cent. for general engineering castings, there is only left about 1,000 cwts. per month.

Mr. Smith.—We manufacture 20,000 cwts. a year.

President.—You don't manufacture as much as that. If you deduct 20 to 25 per cent. out of your present production, it leaves you only about 1,000 cwts. per month.

Mr. Williams.—Yes.

Prices realised.

President.—Now as regards the prices realised by you, I think we asked you to let us have a statement of your total production and realised prices. We have not got it yet.

Mr. Smith.—I have wired to Calcutta for them and I hope to get them to-day or to-morrow.

President.—It is rather an important point.

Mr. Smith.—It is a very important point, I quite agree.

President.—On page 2, your realised price for these castings which amounted to about 7,500 cwts. was a little more than Rs. 38 a cwt. The average rate that you have got was Rs. 38 for most of them and for axle

boxes it works out at Rs. 38-8-0. These are your figures and I have not added anything to them.

Mr. Smith.—I think Rs. 2 had to be paid which brings down the figure to Rs. 36-8-0.

Mr. Noyce.—Rs. 2 to be paid for what?

Mr. Williams.—For machining per box. That is one item.

President.—Even so it does not reduce it much below Rs. 38 on an average. You have given on page 6 your realised price for the whole output as Rs. 35-1-0.

Mr. Smith.—That was what it worked out in 1925.

President.—Would that include everything?

Mr. Smith.—Yes.

Mr. Noyce.—These figures are for 1924-25.

Mr. Smith.—The figures given on page 6 are for 1924-25.

Mr. Noyce.—And figures on page 2 are for 1925-26?

Mr. Smith.—Yes.

President.—I just want to know whether you make any difference between the two.

Mr. Smith.—I am afraid I shall not be able to give you the figures for the total outturn for 1925-26 for some time. They have to be worked out. We have given you the cost, but we have not given you the price at which we have sold out.

President.—I want some sort of figures. Either stick to the calendar or financial year.

Mr. Smith.—We are sticking to 31st March which is our financial year.

President.—Then up to March 1925 may I take it that this Rs. 35-1-0 was the average realised price for all castings and that as far as the calendar year was concerned, for nearly more than half of your output you got an average price in the neighbourhood of Rs. 38?

Mr. Smith.—That I could not say. Certainly it looks like it from this.

President.—I am not asking you to commit yourself to this at present.

Mr. Smith.—I will send up the actual selling price later on.

President.—That is why I particularly wrote to you to let us have these figures. So far as your works costs are concerned, I understand that before 1924-25, you didn't keep them in the proper way.

Mr. Smith.—We had practically no cost sheets.

President.—So far as your average realised prices are concerned, there cannot be any difficulty.

Mr. Smith.—We could let you have that.

President.—From 1923?

Mr. Smith.—Yes.

President.—As regards axle boxes you gave us some prices. The reason why I am asking you for this information is that according to Burn's representation there has not been much drop in the price of castings between 1923 and 1925. They are practically the same. This is part of the case. I would not go into it until you give me the figures.

Mr. Smith.—I think it would be better.

Import prices.

President.—Then I have got to take the other aspect of the case, that is the import price. You have given us only one import price, that is the order that you had completed for Messrs. Burn and Company in 1924.

Mr. Williams.—Yes.

President.—It does not really give us any idea at all as to what the position is to-day and what is of still greater importance is you take the price of one single item two years ago of which the price is lower than that of any

other article and then you say that ought to be the basis of our recommendation.

Mr. Williams.—It covers a large number of castings which are very representative of the general run of our output—at least 10 different components.

Mr. Noyce.—It is two years old. The price you have given is not of great help to us in this year of grace 1926.

Mr. Williams.—We have given you a number of prices which are a month or two old.

President.—Messrs. Jessop and Company tell us that they paid you Rs. 33 a cwt. You do not mention Jessop, but you mention Burn who paid you less.

Mr. Noyce.—Did you mention Burns, because it was there that you were up against the price of imported castings?

Mr. Williams.—We were supplying both Burn and Jessop at exactly the same time. Burn got an order for so many underframes from the Oudh and Rohilkhand Railway and Jessop also had an order for a number of underframes from the same railway. The order was divided between the two firms. The lowest price which Jessop could find was Rs. 33 and the lowest price which Burn could get was Rs. 24-8-0. If Burn had got the whole of the order, we should have had to make these castings at the lower price. We have never yet discovered how they were offered these figures.

Mr. Noyce.—Where were Jessop and Company getting their castings from?

Mr. Williams.—From England. I believe Burn also get some from England too.

President.—This is rather important. In July 1925 Messrs. Jessop and Company gave us Rs. 54 as the price of an axle box, and for imported steel castings they quoted Rs. 40 a cwt.

Mr. Williams.—They didn't quote us that price.

President.—They quoted for Indian castings locally purchased Rs. 40 a cwt. for rolling stock. Now they say that the price of an axle box in 1925 was Rs. 18-1-0.

Mr. Williams.—That is the price I have quoted here.

President.—That works out to Rs. 28 to Rs. 29 with the duty. Even if you take Rs. 18 as the imported price in 1925 and Rs. 18-12-0 in 1926, I think it works out to about Rs. 28.

Mr. Williams.—30*s.* a cwt.

Mr. Smith.—You have got to reckon that is a machined axle box.

Mr. Noyce.—What is the difference?

Mr. Williams.—We have got to take Rs. 2 off that. We have got to machine it.

President.—Then you ought to have added Rs. 2 to the rough castings. If you add Rs. 2 the prices are still more favourable to you.

Mr. Williams.—We don't want to consider machined castings.

President.—We must compare the two things which are comparable.

Mr. Williams.—We have got to take Rs. 2 off that.

Mr. Noyce.—I am not quite clear what the position is about the finished castings. What we have got to do is to compare the prices of finished axle boxes. Robert Hyde's prices are, I take it, for finished axle boxes.

Mr. Williams.—Yes.

Mr. Smith.—But these prices are for unmachined castings.

Mr. Noyce.—Are the axle boxes for underframes more elaborate than those for wagons?

Mr. Williams.—No.

Mr. Noyce.—The price here quoted by Jessop and Company was for steel castings for wagons and underframes. What I want to know is whether these have to be made into axle boxes.

Mr. Williams.—No.

Mr. Noyce.—Are cast steel boxes imported?

Mr. Williams—Yes.

Mr. Noyce.—It seems quite obvious that they cannot get their axle boxes complete at Rs. 18-12-0.

Mr. Williams.—They don't say whether they are for 10×5 or 9×4½. These axle boxes are made of black castings. I know a lot of axle boxes are imported machined and fitted ready to be put on to the underframes.

Mr. Noyce.—They got machined axle boxes at Rs. 18-12-0?

Mr. Williams.—They say so. I can hardly believe it. It all depends on what size it is—whether it is completely machined or without fittings.

President.—It works out at Rs. 54 in July 1925 for an axle box complete.

Mr. Williams.—Rs. 54 for an axle box complete with brass bearings, cover plate on the front of the box and nuts and dust shield.

Mr. Noyce.—The term axle boxes seems to have various significations.

President.—What do you call an axle box as you sell it?

Mr. Williams.—There are two sizes, 10×5 and 9×4½.

President.—As you supply it, what does it contain?

Mr. Williams.—It is a casting with the grooves machined, faced for the cover plate. There are no fittings or bearings.

President.—Are there no fittings and no bearings?

Mr. Williams.—No, it does not contain the cover plate. The plate is made of pressed steel. They are discarding cast steel for that and using pressed steel. Fittings include the bearings.

President.—What do you mean by bearings?

Mr. Williams.—Gun metal bearing inside which costs not less than Rs. 18. That is where the difference comes in.

President.—That would cost you about Rs. 18.

Mr. Williams.—Yes. The cost of machining and supplying a set of fittings will be Rs. 5.

President.—That would take you to Rs. 23.

Mr. Williams.—Yes, that gives you Rs. 31 for an axle box.

President.—The prices they have quoted are Rs. 18-1-0 for 1925 and Rs. 18-12-0 for 1926. This will not include the plate and fittings.

Mr. Williams.—Obviously not. It is quite impossible.

President.—Do you think that the price of Rs. 18 is comparable to your Rs. 24-8-0 or would the two include different things?

Mr. Williams.—I think they are not comparable. They include different things.

President.—It is a pity that you have not given us any recent prices. You must remember that you were basing your application for protection on the difference between this price and your reasonable selling price and what you have given us is a price two years old. Is it not necessary to have supplied us with something more recent?

Mr. Williams.—We supplied you our production cost sheets for 1924-25 and it was during that period these castings were made and supplied to Messrs. Burn and Company, so I thought that would give a very fair comparison as to what it was costing us to make and the import price.

President.—We are not going to give you protection, if we do, with retrospective effect. We must have the present works cost and the present price. What I would like you to tell us is the basic price upon which you put your claim. Now I will take the price that you have given for July 1925. It is not very recent.

Mr. Williams.—For September 1925 I have got one, 40*s.* per cwt. black castings delivery, f.o.r. British port.

Mr. Noyce.—The real trouble is that you have got no standard of comparison.

Mr. Williams.—That is our difficulty. So much depends upon shape and workmanship.

President.—For that reason, would it not be convenient to take the axle box as a typical casting?

Mr. Williams.—Yes.

President.—As regards that, you have not given us the cost of production of a typical axle box. Supposing we took your average cost, could we go far wrong as that being the cost of the axle box?

Mr. Williams.—I think it is the only way it can be done.

Mr. Smith.—The question really is whether the axle box represents the average castings which we do. On the whole, a casting for a bogie underframe is more correct, because it represents a variety of castings.

President.—An axle box contains a reasonable amount of castings in it. If the total quantity of castings in a wagon is taken as 7 cwts. an axle box represents about 8 per cent. of the total weight. May not that be taken as typical?

Mr. Williams.—It is a cheap casting.

President.—Supposing we assume your average works cost to be Rs. 25 and then if you say an axle box is a cheap casting, what difference would you allow for it? We have got to compare it with some casting which competes against you.

Mr. Williams.—Re. 1 a cwt. at the most. The difference is only in the liquid steel.

President.—Then we have got some basis of comparison. If we took an axle box and deducted Re. 1 from your average works cost and then compared it with the imported axle box in that state, we would get a fair comparison?

Mr. Williams.—I think you would.

President.—Please see page 6 where you give the prices of leading British foundries for typical railway castings. You take 30*s.* as the price f.o.r. port and then you give the landed price in Calcutta as Rs. 23-8-0 a cwt. I would like to see how that is worked out. First of all we shall deal with it in sterling, *ex* their works. Did you get this figure from them or did you work it out yourself?

Mr. Williams.—We worked it out ourselves. We have taken that as f.o.r. because the works would be alongside a railway.

President.—We will take that as f.o.b.

Mr. Williams.—Yes.

President.—By adding the figures given by Burn in their letter to you—assuming that their figures are correct—for freight, commission, etc., we come to £1-12-9. Let us take that as the sterling c.i.f. price. That is, what it comes to?

Mr. Williams.—Yes.

President.—This £1-12-9 is the equivalent of what?

Mr. Smith.—At the rate of 1*s.* 6*d.* to the rupee, it comes to Rs. 21·7.

President.—You add 10 per cent. on that.

Mr. Smith.—Yes. Then it comes to Rs. 23·87.

President.—Then you add 0-4-5 to that.

Mr. Smith.—It comes to Rs. 24-1-5.

President.—That is the price.

Mr. Smith.—Yes.

President.—Will that axle box now correspond to the kind of axle box you supply?

Mr. Smith.—It is the same as we supply it to Burn for machining. But it is not the same as we sell it to railways.

President.—Don't bring in Burn here. Is it, or is it not, the same as you ordinarily sell out of your works?

Mr. Smith.—Ordinarily the axle box that we sell is machined. It costs two rupees more to do that.

President.—Robert Hyde's axle box is unmachined, is it not?

Mr. Williams.—It is not machined.

President.—I am not now talking of the realised prices. I simply want to know whether the axle box of Robert Hyde's is comparable to yours.

Mr. Williams.—It is identical.

President.—If your axle box requires machining, their axle box also requires machining.

Mr. Williams.—Yes.

President.—It does not contain any fittings or the cover plate.

Mr. Williams.—No.

President.—That very nearly works out to what Jessop have quoted; in fact, Jessop's quotation is higher.

Mr. Williams.—What is it that they have quoted?

President.—Rs. 18-12-0 for 1926 for cast steel boxes.

Mr. Smith.—It works out to Rs. 29-8-0 per cwt.

President.—On page 6 of your representation, you have quoted f.o.b. or f.o.r. prices, and in the last column of the statement you have converted them into rupees at 1*s.* 6*d.* to the rupee. What are these prices that you have given in the last column? Is 35 shillings equal to Rs. 28?

Mr. Smith.—After adding freight and landing, it comes to Rs. 27-2-11, and we have put it as Rs. 28.

President.—What I want to point out here is that Messrs. Robert Hyde and Sons' quotations are for all castings.

Mr. Williams.—We sent the drawings to them and asked them to quote for a set of bogie underframes.

President.—Would these include axle boxes?

Mr. Williams.—Yes.

President.—In that case, you see that there is a difference of 5 shillings.

Mr. Williams.—Yes.

President.—Between the average of all castings and the axle box.

Mr. Williams.—5 shillings more.

President.—Against the one rupee that you suggest.

Mr. Williams.—I don't see why it should be so.

President.—It may be accounted for in this way that Messrs. Robert Hyde and Sons are specialists in axle boxes and therefore their prices are very much lower than other builders' prices.

Mr. Williams.—Messrs. Robert Hyde and Sons are specialists.

President.—I understood in the previous enquiry from what the wagon builders said that these axle boxes are made by some specialist firms.

Mr. Williams.—The bulk of them are made by the Patent Axle Boxes Company who make nothing else.

President.—Messrs. Robert Hyde and Sons may be associated with those people.

Mr. Williams.—Possibly. I don't think they are though, because I have seen the work of the Patent Axle Boxes Company and there is a world of difference between the two.

Mr. Noyce.—Are the axle boxes of the Patent Axle Boxes Company imported into India?

Mr. Williams.—Yes. They are not strictly comparable because they are not cast steel boxes.

Mr. Noyce.—Are they cast iron axle boxes?

Mr. Williams.—No, they are made of malleable iron which is a very different thing from cast iron.

President.—How do you account for this big difference between Hadfield's Lake and Elliot's and Cammell Laird's? Cammell Laird's are a very big firm.

Mr. Williams.—They are very big people but they don't specialise in this particular class of work. They probably go in for more heavy work. This class of work is probably not attractive to them.

Mr. Noyce.—How were these prices obtained?

Mr. Williams.—By a direct application through our home agent to the firms mentioned. We sent each of them a set of drawings and asked them to quote us their prices.

President.—When it comes to actual transactions, you can always bring them down a little lower.

Mr. Williams.—Yes.

President.—You have not got anything more recent than that.

Mr. Williams.—No.

President.—What is the best means of getting more recent information?

Mr. Williams.—The best way is to cable to our agent at home and get more recent prices.

Mr. Smith.—The best thing is to ask the Consulting Engineers of the Government Railways.

President.—Mr. Smith, I think you must get the information for us in the first instance.

Mr. Smith.—What I feel is that our agent at home is well known as the agent of the Hukumchand Electric Steel Works and that an enquiry from him would not be treated in the same manner as that coming from the Indian State Railways.

President.—I am trying to point out that you should, in the first instance, supply us with the information.

Mr. Smith.—Yes.

President.—Are Continental castings in competition against you?

Mr. Williams.—They have not been until during the last six months; then we came up against a very serious item in connection with some bogie underframe castings for Messrs. Burn and Company.

President.—What was the price?

Mr. Williams.—Rs. 14 per cwt.

President.—That is what Jessop are quoting. Did they actually supply you with detailed information?

Mr. Williams.—They refused to say anything more. They simply said 'take it or leave it at that.'

President.—What was the date of that?

Mr. Williams.—I have not got it here. I think it was within the last four or five months.

President.—Was that duty paid?

Mr. Williams.—Yes, landed price.

President.—So far as Messrs. Burn and Company are concerned, in 1925, they gave us the price of Rs. 552 for 26 cwts. for steel castings which works out to about Rs. 21 per cwt.

Mr. Williams.—Was that Continental?

President.—I don't know. It is not stated there.

Dr. Matthai.—Would your home agent be able to get quotations in respect of actual transactions?

Mr. Williams.—He might. It is just a question whether they would divulge to a man like him.

President.—But what I cannot understand are these three different sets of quotations given by three different companies at the same time!

Mr. Williams.—I don't suppose so. I think it is the same company quoting to the three different people.

President.—I don't find this figure of Rs. 33 anywhere.

Mr. Williams.—Not in Jessop's.

President.—Jessop's quotation for both imported castings and Indian castings is Rs. 40 per cwt. It may be that they may have added some other charges.

Mr. Williams.—We never supplied railway castings to them at Rs. 40 per cwt.

President.—Did these castings require machining?

Mr. Williams.—Yes, but they do it themselves.

President.—Is the machining done in your works?

Mr. Williams.—No. We don't do any machining on underframe castings. We sell them rough castings and they machine them. They will have to do the same even with regard to imported castings.

President.—In the case of castings other than axle boxes are they all rough castings?

Mr. Williams.—They are almost invariably imported as rough castings.

President.—As regards spring steel we don't want to go into much detail because you don't really give us any information as regards the import price. You simply say that it may be Rs. 11 to Rs. 12 per cwt. That is not the kind of information on which we could act. There is plenty of spring steel imported into the country. Don't you think that you might endeavour to supply us with actual evidence of transactions? It is rather hard on the Board that they have got to find the information that ought to come from you.

Mr. Williams.—It covers a wide range.

President.—You have got to put forward a case and establish it.

Mr. Smith.—If I get you from Messrs. Ahmuty and Company the price they paid for spring steel purchased locally, would that do?

President.—What we want is the c.i.f. price of a comparable article, bazar prices are no good. I am trying to point out that it is no use saying that they are importing between Rs. 11 and Rs. 12 and leave us at that. We could not possibly act upon information such as that.

Mr. Smith.—I feel perfectly certain that I can give you the landed cost of certain sections of spring steel.

President.—You must make up your mind as to what you are going to manufacture. You have told us that you are going to manufacture spring steel. I think that you told us that you are going to manufacture rounds. The first thing we want to find out is at what price the foreign article is coming into the country. On that you have given us no evidence.

Mr. Smith.—If we get that for you, would it be published?

President.—Everything is published.

Mr. Smith.—Even the name?

President.—You might omit the name, if you like. I don't think it matters very much. As it is, your case is incomplete.

Mr. Williams.—Would it do if I get from the Controller of Stores of the Eastern Bengal Railway a full list of the prices quoted to him with the names of the firms?

President.—That would be some evidence.

Mr. Williams.—It would give the market price in Calcutta.

President.—I don't want the market price in Calcutta. I understood you to say that he was importing.

Mr. Williams.—He buys it locally.

Mr. Noyce.—It is an imported article. Can't you get the prices from the importers?

Mr. Williams.—I will try, but I don't know whether they would tell us.

President.—We are getting information about the prices of all kinds of steel. I don't see any difficulty in that.

Mr. Williams.—I will try to get that for you.

Position of the firm.

Mr. Noyce.—I want a little more information about the position of the firm. It is a private company, I understand.

Mr. Smith.—Yes.

Mr. Noyce.—Has Sir Sarupchand Hukumchand supplied the whole of the capital?

Mr. Smith.—This is merely a department of the firm of Sir Sarupchand Hukumchand & Co. As to the actual constitution of the firm, neither of us could actually say, but I understand that he is not the only partner in it.

Mr. Noyce.—Your own position in relation to the firm is only that of its auditor. To the best of my knowledge, this is the only case in which the auditor of a firm has appeared on behalf of a firm which has applied for protection. What is the reason for that?

Mr. Smith.—The reason is that in this particular case I have practically acted as the accountant of the firm, going out to the works once a month over a long period, and generally acting as an accountancy adviser.

Mr. Noyce.—It is a somewhat unusual position for an auditor.

Mr. Smith.—Not in the case of a private concern.

Mr. Noyce.—Does this branch of Sir Sarupchand Hukumchand's business prepare a balance sheet in the usual way?

Mr. Smith.—Yes.

Mr. Noyce.—And signed by you in the usual manner as auditor?

Mr. Smith.—Yes.

Mr. Noyce.—What was your previous experience before you joined this firm, Mr. Williams?

Mr. Williams.—I was trained as a metallurgist at Woolwich and I came out to India as Metallurgist and Steel Works Manager of the Government Gun Factory at Ishapore. I was there for 8 years in charge of their steel melting furnaces and rolling mills and I came from there to this firm to start this works.

Mr. Noyce.—Have you been here as a metallurgist since the beginning?

Mr. Williams.—It was my own scheme really.

Mr. Noyce.—What other firms are there in India manufacturing steel castings?

Mr. Williams.—None at present. There were two others but they have all closed down.

President —Fairbairn's have shut down temporarily?

Mr. Williams.—It was the other part which failed, still they decided to close down the whole thing.

Dr. Matthai.—When did the other go out?

Mr. Williams.—Probably 18 months to 2 years ago.

Outturn.

Mr. Noyce.—On page 5 of your representation, you say that your outturn has been increasing at the rate of 250 tons per year for the last 4 years. The rate was not maintained last year and the output hardly went up by 50 tons.

Mr. Williams.—That is so. From 1922 to 1925, the rate was maintained.

Mr. Noyce.—Can you give us any reason as to why the rate of progress was checked last year?

Mr. Williams.—There is no particular reason I can give except that if we had secured that order for bogie underframes from Messrs. Burn & Co., we probably should have maintained our progress. We missed that merely on account of price.

Mr. Noyce.—Do you consider that the principal thing you are up against is price and not quality?

Mr. Williams.—Yes.

Mr. Noyce.—Has the rate of progress in the sales of your general engineering castings been on a level with your sales to the railway companies?

Mr. Williams.—The bulk of the increase is in the sales to the railways.

Mr. Noyce.—Your general side has not increased very much, I think?

Mr. Williams.—I doubt whether it will advance very much more than at present.

Mr. Noyce.—Is there any scope for an increase in that direction?

Mr. Williams.—Yes, factories, general engineering works, Government Departments like the Public Works Department, Marine Works, Docks like the King George's Docks, and any schemes of that sort where they have heavy cranes, excavating machinery, etc. and where a good deal of steel work is required for replacements.

Mr. Noyce.—It would seem that there is considerable scope for an increase in the demand for steel castings from the sources you just mentioned?

Mr. Williams.—The amount of work that we have been getting from those sources has not advanced. It is very, very gradual. The chief advance has been in the repetition work that we do for railways and wagon building firms.

Mr. Noyce.—Is it because the mills, docks and the rest are getting their steel castings from England or from the Continent?

Mr. Williams.—Partly that. At the same time I don't think there is a very much bigger market than we are getting.

Mr. Smith.—Jute mills have all got stocks of spares which would last them for several years.

Mr. Williams.—We get a certain amount of work for jute mill machinery where that machinery is built in India. Messrs. Angus Engineering Company make jute mill machinery and they very often place orders with us. Where jute mill machinery is built in India, we very often get orders for steel castings for that particular machinery but where the machinery is imported from England, they get their spares also from England.

President.—We understand that so far as jute mill machinery is concerned, they don't use very much steel.

Mr. Williams.—No, they don't. The principal items are:—

Loom Swords.

Bevel Wheels for Softeners.

Pinions for Softeners.

Hydraulic Valves for Presses.

President.—Is it mild steel they use for these things?

Mr. Williams.—No, steel castings.

Scrap.

Dr. Matthai.—With regard to the question of scrap, supposing we did give you protection, would not there be some possibility that engineering firms in this country, wagon builders, railway workshops and so on, might start their own steel foundries?

Mr. Williams.—I think it is possible.

Dr. Matthai.—In that case, there would be less available scrap for you. Is not that a possibility?

Mr. Williams.—That is so.

Dr. Matthai.—The total certain demand that you have estimated for your products is 2,000 tons a year.

Mr. Williams.—Yes.

Dr. Matthai.—It is quite likely, is it not, supposing that kind of development took place, practically all that work or a bulk of that work, might not come to you at all?

Mr. Williams.—If the wagon-building firms find that they could produce castings at a cheaper rate than we could, then that would happen.

Dr. Matthai.—You don't think that that would seriously affect the question of the supply of your raw material.

Mr. Williams.—No.

Dr. Matthai.—As regards this estimate that you have given in answer to the President of 20,000 tons of scrap available in the country, the difficulty I feel is this. You give here certain figures about the sale of scrap by certain railways.

Mr. Williams.—Yes.

Dr. Mattahi.—Take, for example, the North Western Railway for which you give a figure of 10,000 tons. I have a sort of idea that it is not their annual sale but the accumulated stock which they sell periodically.

Mr. Williams.—Most of the railways hold their scrap sales annually. I know that the East Indian Railway and the Bengal Nagpur Railway do so.

Dr. Matthai.—Do you know about the North Western Railway?

Mr. Williams.—I do not know definitely whether it is an annual affair or not.

Dr. Matthai.—About turnings and borings you give the price in the printed representation at Rs. 10 a ton, but in your cost statements which you have sent us the figure you give is Rs. 13 a ton.

Mr. Williams.—In the case of the Bengal Nagpur Railway, we pay them Rs. 10 a ton f.o.r. Kharagpur.

Dr. Matthai.—Would that correspond to Rs. 13 a ton landed at your works?

Mr. Williams.—Yes.

Dr. Matthai.—If you look at your statement A—I am not going into the question of costs, I am just looking at the list of the materials—moulding composition is the biggest single item among your materials.

Mr. Williams.—Yes.

Dr. Matthai.—What does that consist of?

Mr. Williams.—It consists of silica sand, molasses, a certain amount of plumbago and water.

Dr. Matthai.—Where do you get these from?

Mr. Williams.—The sand comes from a place called Rajmahal.

Dr. Matthai.—Do you make the composition in your works?

Mr. Williams.—Yes.

Dr. Matthai.—There has been a considerable fall since 1924 in the cost of the moulding composition. You give the rate as Rs. 20 in your first statement and Rs. 16 in your second statement.

Mr. Williams.—When we first started, we used to buy it from a firm in Calcutta who set up a plant solely for the purpose of making moulding composition. In the course of our experiments in our own works we found that we could make the same composition from local materials at a very much cheaper rate. So, we discontinued buying it from outside and began to make it ourselves.

Dr. Matthai.—On this question of scrap recoveries, you take credit for your scrap at a flat rate. As regards wasters, are you able to find a sale for wasters as other than mere scrap?

Mr. Williams.—No.

Dr. Matthai.—It goes back into the works.

Mr. Williams.—It goes back into the furnace or is sold as steel scrap.

Demand for castings.

Dr. Matthai.—With regard to the question of demand for your castings, this estimate of 40,000 axle boxes that you have given is based, I suppose, on the assumption that there would be a fairly general tendency for the substitution of cast-steel boxes for cast iron boxes?

Mr. Williams.—Yes.

Dr. Matthai.—On that assumption, you got that estimate of 40,000 boxes.

Mr. Williams.—In fact, I have assumed that eventually nothing but steel boxes will be used.

Dr. Matthai.—Ultimately, that is the assumption.

Mr. Williams.—Yes. Even so, I consider that 40,000 to 50,000 boxes will be required for replacements.

Dr. Matthai.—How does the price of cast iron boxes compare with that of steel boxes?

Mr. Williams.—It would probably be a third.

Dr. Matthai.—As big as that?

Mr. Williams.—Yes.

Dr. Matthai.—What about malleable iron boxes?

Mr. Williams.—The price of malleable iron boxes is practically the same as steel boxes.

Mr. Noyce.—What about the durability?

Mr. Williams.—In the case of malleable iron, it is the same as steel.

Mr. Noyce.—And cast iron?

Mr. Williams.—It might last one day or it might last 20 years. It depends really on what happens in shunting. It is not merely a question of replacing the box. For instance, the East Indian Railway told me that they had at one time 1,000 wagons laid up because they had previously been fitted with cast iron boxes. In shunting many of these boxes were broken.

Mr. Noyce.—Have you any idea as to the cost of the cast iron or malleable iron?

Mr. Williams.—No.

Mr. Noyce.—You say that you anticipate in due course that all the cast iron boxes will be replaced by steel boxes but there is apparently no reason why they should not be replaced by malleable iron boxes?

Mr. Williams.—One or the other. I am treating malleable iron in the same class as steel.

Mr. Noyce.—It is hardly the same class.

Mr. Williams.—I am looking at it from the point of view of the number of replacements required.

Dr. Matthai.—In your representation you have referred to the order of the Oudh and Rohilkhand Railway for 20,000 steel boxes. Was that executed to their entire satisfaction?

Mr Williams.—The whole order was never completed for this reason. They expected to use so many boxes in the matter of replacements in a year and they wanted them to be supplied to meet a certain demand, but they found at the end of the first year that we had supplied them with 6,000 boxes of which they had not used 250. So, they asked us to suspend the manufacture after the end of the financial year until they could determine exactly what their replacements were going to be.

Dr. Matthai.—So, a considerable part of that order still remains unexecuted.

Mr. Williams.—Yes, more than half of it.

Dr. Matthai.—The order that you got from the East Indian Railway in 1925 for 4,000 boxes, what is the position with regard to that?

Mr. Williams.—That order was placed on the understanding that we should supply them with 2,000 boxes as quickly as we could and the other 3,000 as they called for them. We supplied the 2,000 boxes in the first instance and they have now called for 1,000 and the rest will remain in stock until they call for them.

Dr. Matthai.—Can you give us any instance of any considerable repeat orders that you have had? It would be some kind of proof of the satisfactory quality of your work.

Mr. Williams.—In the case of the Great Indian Peninsula Railway, they have told us that they don't propose to import any more steel castings for replacements and that as replacement castings are required, they will send us the order direct and we have given them a flat rate.

Dr. Matthai.—What is the total quantity you have done for them so far?

Mr. Williams.—I could not give you that figure off hand. I would let you have it if you want. They never ask us to quote a price.

President.—Does the flat rate extend over a number of years?

Mr. Williams.—Indefinitely. It was originally for a year, but it is still going.

President.—What is the flat rate?

Mr. Williams.—Rs. 38.

Mr. Noyce.—Does that include axle boxes?

Mr. Williams.—They have never given us any orders for axle boxes?

Dr. Matthai.—Have you any idea of the total quantity required?

Mr. Williams.—I could probably find out from them. They have not given us any indication as to what the amount will be. It is only comparatively recently that they have agreed to place the order with us. I think they are sincere in what they say because they have allowed us to retain all their patterns.

Dr. Matthai.—When a railway orders castings, how are they tested?

Mr. Williams.—They are inspected by the Controller of Inspection and nothing leaves our works unless it has been inspected by the Inspector and if any particular tests are required, they are carried out at the works or he has it done in the Government Test House at Alipore.

Mr. Noyce.—He tests for everybody, does he?

Mr. Williams.—He is the servant of the Chief Controller of the Indian Stores Department. He inspects not only our works but also all carriage and wagon works.

Mr. Noyce.—As regards the work that you do for Jessop and Burn, who pays for the inspection? I can quite understand the Controller of Inspection inspecting the work done by you for Government or for a State Railway.

Mr. Williams.—I don't know who pays for it. I am now speaking of castings. They have got to be inspected by the Controller of Inspection.

Dr. Matthai.—Judging from the figures in your statement, the position at present is that the total demand is 2,000 tons of finished castings on your estimate. The two melting furnaces that you have now, supposing they are worked to their full capacity, would produce 4,500 tons of finished castings. That is the present position, is it not?

Mr. Williams.—Yes, 6,000 tons of liquid steel or 4,500 tons of finished steel.

Dr. Matthai.—Supposing you are able to get every available order in the country, there would still be left a certain amount of unexpended capacity in your works which is a very considerable amount.

Mr. Williams.—For that reason we want to commence the manufacture of spring steel in order to use up the excess melting capacity.

Dr. Matthai.—For the purpose of spring steel, you have got furnaces in reserve, haven't you?

Mr. Williams.—They were not bought with that intention. We realise that we have got a bigger melting capacity and in order to work both these furnaces to their capacity, we want to introduce the making of spring steel which will reduce the cost of our liquid steel for our castings as well as the ingot for spring steel.

Dr. Matthai.—In the statement that you gave the Board in their first enquiry you gave the percentage of wasters as 15 to 20 per cent.?

Mr. Williams.—Yes.

Dr. Matthai.—How does it stand now?

Mr. Williams.—I should think it is in the neighbourhood of 10 per cent.

Dr. Matthai.—Could you compare it at all with the practice in the United Kingdom?

Mr. Williams.—I think the figure in the United Kingdom would be about 5 per cent. A really good founder should be able to work even below that limit.

Dr. Matthai.—From your experience in this country, how would it compare with the experience of railway workshops where they do castings?

Mr. Williams.—I should think our figures are better than theirs.

Dr. Matthai.—With regard to spring steel, the position as regards raw materials is the same as in the case of steel castings. The bulk of the materials you require you would find in India.

Mr. Williams.—Yes. The only things we would have to import are magnesite bricks, plumbago stoppers and things of that kind. Practically the whole of the raw materials can be obtained locally.

Dr. Matthai.—The demand for spring steel in the country, how much do you estimate it at?

Mr. Williams.—The figure for 9 months ending December 1925 was 4,300 tons.

Dr. Matthai.—Did you get that from the Trade Returns?

Mr. Williams.—Yes. According to the latest copy of the Trade Returns available, the figures are as follows:—

	Tons.
1923-24	3,537
1924-25	4,164
1925-26	5,241

Dr. Matthai.—With regard to the demand for spring steel, your view is that you are not likely to find a market till you actually begin to produce and give consumers some time to judge of the quality of your product.

Mr. Williams.—Yes.

Dr. Matthai.—In the rolling of spring steel, do you think there is more skill and experience required on the part of labour than in making steel castings? That is to say, if you started a works for the production of steel castings, would you be able to find the necessary skilled labour more easily in this country than in the case of spring steel, or is it the other way about?

Mr. Williams.—At first, it would be very difficult.

Dr. Matthai.—It does not differ in any way from an ordinary rolling mill?

Mr. Williams.—It is almost the same.

Dr. Matthai.—The fact that you have iron moulding in this country as a fairly old industry gives you a supply of labour with regard to steel castings which you don't get with regard to spring steel, is not that so?

Mr. Williams.—I don't think the difficulty would be very great. Possibly it would be greater in the case of spring steel than in the case of steel castings.

President.—Is it a post-war mill or is it a pre-war one?

Mr. Williams.—It is a new mill which was built and intended to be put down just before the war ended.

Dr. Matthai.—The factory at Ishapore, how far is that from your works?

Mr. Williams.—Approximately 18 miles.

Dr. Matthai.—How long has that been going?

Mr. Williams.—It has been going probably for over 30 years.

Dr. Matthai.—You say that it is of the same capacity as your proposed mill.

Mr. Williams.—Yes, it is the same sized mill.

Dr. Matthai.—Is that a more recent mill?

Mr. Williams.—No, it is very much older. Probably it is 20 years old.

President.—As regards your demand, do you know that the Indian Standard Wagon Company stated in their earlier evidence that they thought of putting up a cast steel foundry as also a spring shop that would enable them to make springs? If that happened, what would happen to your market?

Mr. Williams.—A spring shop means a shop for making springs and not making steel for springs.

President.—What would happen to your market?

Mr. Williams.—So far as the Indian Standard Wagon Company is concerned, I doubt whether we ever had a single order that was worth having.

President.—That is not the point. They are the biggest wagon builders in the country. Their capacity is said to be 2,000 wagons working a single shift and 3,000 wagons working two shifts. That represents 50 to 75 per cent. of the present day requirements of wagons in the country and if they then put up a cast steel foundry in which they can make both castings and ingot steel, what happens to your market? Supposing you get protection, then it may become worth their while to make their own castings. I am just trying to point out that it may not altogether be a blessing to you. Is not there such a possibility?

Mr. Williams.—There is.

President.—It is a big possibility. After all, they would require more castings than any other wagon builder and if they find that protection is being given to castings then they may start their own foundry.

Mr. Smith.—We have only asked for protection for 5 years and if they want to benefit by it, they will have to put up a mill which will take them nearly three years to finish.

Dr. Matthai.—That is a difficulty of a different kind.

President.—Supposing you get protection, you may not find it such a blessing as you are looking forward to. A considerable portion of your market will then disappear, is not that so?

Mr. Williams.—Quite so.

Mr. Smith.—I consider it very unlikely that it would happen.

President.—If protection succeeds as a measure, that is a result which is ordinarily to be expected.

Mr. Smith.—Even if I am wrong in my estimate of 3 years, it would take them a long time to get their plants out and get the mill going.

President.—A cast steel foundry does not take as much as 3 years.

Continued on the 18th May 1926.

Fair selling price.

President.—Mr. Smith, to-day we want to go into the question of your fair selling price. Then we shall have to consider your proposal as to the amount of protection that is required and the means of giving you that protection.

Now, have these statements that we have received been prepared by you?

Mr. Smith.—They were not prepared by me. I looked over them simply.

President.—But were the accounts contained in those statements prepared by you?

Mr. Smith.—They have been taken up from my audited balance sheets.

President.—Did you check the figures which were submitted to us?

Mr. Smith.—I have seen that the totals agree.

President.—Are these accounts according to the method followed by you in the audited accounts?

Mr. Smith.—They are.

President.—For how many years have you practised as a chartered accountant?

Mr. Smith.—24 years.

President.—You don't practise now as a chartered accountant, do you?

Mr. Smith.—No, I retired in April.

Mr. Noyce.—Are you still auditing the accounts of this firm?

Mr. Smith.—No, I don't even know to whom they passed it.

President.—Was the cost account system as shown in the printed cost sheet devised by you?

Mr. Smith.—Entirely by me.

President.—What I propose to do is to take your costs for 1924-25 in detail to some extent and then compare them as regards the more important items with the costs of 1925-26, because I didn't have the time to go into fuller details as regards 1925-26. I think that your works costs fall under three principal headings. The first thing is the cost of materials, *i.e.*, scrap or charging materials, stores and labour. We have explained to you before that, in order to determine your reasonable selling price, we shall first go into your works costs and then add the overhead charges and the manufacturer's profit. Let us take the raw materials by which I mean the metallic mixture. In the cost sheet for 1924-25 the first item shown is stores issued.

Mr. Smith.—That should not have been put in at all. It was a mistake on the part of the clerk who put that in.

President.—I just want to know what you would put in there.

Mr. Smith.—That was not intended to be used at all. We are not concerned with the raw materials put in.

President.—What do you mean by "we are not concerned"?

Mr. Smith.—Not from the point of view of the cost.

President.—Surely the figures must in any case be put in. How did you get 20,610 cwts. in 1924-25 costs?

Mr. Smith.—That is the liquid steel made.

President.—It has been put under stores issued.

Mr. Smith.—As I say, it should not have been put in.

President.—I take it that the total scrap put in is 10 per cent. more.

Mr. Smith.—The total metallic charge is less 10 per cent.

President.—It comes to 22,900 cwts. of scrap put in.

Mr. Smith.—Yes.

President.—Then you deduct 10 per cent. straight off.

Mr. Smith.—Yes.

President.—As a matter of fact in the costing system it should not be deducted there at all, because this gives an idea that this was the quantity charged, whereas, as a matter of fact, it was 22,900 cwts.

Mr. Smith.—It was more than that. As far as I am concerned, I never treat the waste in my cost sheet.

President.—It doesn't matter what you do. We want to know what the exact position is. The point is you first of all deduct 10 per cent. from your materials and then you make a further reduction of 33⅓ per cent. That doesn't show the correct amount of wastage. Let us put it this way. The material wasted from the raw material stage to the finished product is now about 40 per cent. and not 33⅓ per cent.

Mr. Smith.—That is so.

President.—Mr. Williams, don't you regard that as a very large percentage?

Mr. Williams.—We get 90 tons of liquid steel from which we deduct 33⅓ per cent.

President.—It is a very big percentage. In the first place I don't see on what principle you deduct 10 per cent. to start with, because it is all steel. I should like you to explain why you first of all deduct this 10 per cent.

Mr. Williams.—The figure is according to the class of scrap that we are using. If we are using good scrap, our yield is very much higher than if we are using a rusty scrap.

President.—10 per cent. is a very large percentage.

Mr. Williams.—No. When we are using turnings and borings, the loss is very often a good deal more than that.

President.—But you have not got any basis for that. You simply put down 10 per cent. It is not borne out by any actual results, is it?

Mr. Williams.—It is borne out by the final figure we get.

President.—The final figure you have got is purely hypothetical.

Mr. Williams.—It is borne out by actual results.

President.—In the case of Tata's for instance, they give the actual percentage of the yield.

Mr. Williams.—Do they weigh it?

President.—I do not know what the system is, but this is how they probably measure it. They have got ingot moulds and they know the capacity of each ingot mould. They get the number of moulds multiplied by the capacity.

Mr. Smith.—That is a very easy matter if we are dealing with ingots.

President.—How are we to know that you are not allowing too much wastage? In what way can we check it?

Mr. Smith.—By the final result of the casting which we sell after allowing for stock in one half year. I commented upon this in my Report on the 31st March 1925 balance sheet. I say:—"The total liquid steel produced in the six months is 10,120 cwts. and the outturn of finished goods is 6,239 cwts. The loss is therefore 3,881 cwts. or a percentage of 38⅓ per cent. This loss, being as it is 5 per cent. in excess of our estimate of 33⅓ per cent., is serious."

President.—How did you determine that?

Mr. Smith.—I determined that by taking the actual sales and, after making allowance for the stock at the beginning and at the end, I found that the actual outturn of finished articles was so much, which was 6,239 cwts.

President.—There again you took the liquid steel after the 10 per cent. deduction was made.

Mr. Smith.—I took the figure which was absolutely final.

President.—What six months are you talking of?

Mr. Smith.—March 1925.

President.—But we haven't got the six months accounts here.

Mr. Smith.—I can tell you from my memory. The other one was 25 per cent. in September 1924. In my Report I went on to say:—"But we are inclined to think that it is probably due to bad stock-taking on 30th September 1924 in which perhaps many castings since rejected may have been treated as good. We put forward this suggestion as at the period of last stock-taking the stock was very large and consequently difficult to take, more especially as it was not at that time arranged, but was lying in a large heap. We are strengthened in this opinion when we consider the very low percentage of waste last half year which was only 25 per cent."

President.—As against 38 in the previous half year.

Mr. Smith.—As against 38 in the next one. The stock on 30th September, owing to the fact that our finishing and welding shop was jammed with work, had accumulated to a very large extent, and though the castings were taken and weighed, we were not in a position to examine very carefully our wasters.

President.—Until you give me the exact figures as to your total sales and your stock, I cannot follow this at all.

Mr. Smith.—That I shall have to prepare when I go to Calcutta.

President.—When you are accounting, I don't think it is a correct thing to take hypothetical figures at all.

Mr. Smith.—We cannot do anything else in the cost accounts. The finished product comes too late. It takes three months before it is finished. If we were to wait for the weight of the finished product, that would mean that the information by the time we got it would be useless.

President.—That is not the point. In a particular year you ought to know how much you have turned out.

Mr. Smith.—We do.

President.—Then you ought to know in that year how much of that was wasters and how much was scrap. What is the difficulty? I don't see it at all.

Mr. Noyce.—Your point is that they know the amount of scrap at the beginning and at the end of the year and they know the amount of castings they have turned out. Therefore they ought to know exactly how much scrap has been used for castings.

President.—No. My point is that there should be no difficulty in their being able to say how much weight of castings has been turned out by them in a particular year.

Mr. Smith.—I see your point.

President.—First of all you deduct 10 per cent. straight off in the furnace department. That I say is not correct anyhow. Then after having deducted 10 per cent. from the total raw material, you deduct 33⅓ per cent. That you call as your finished casting. I say that that is a purely hypothetical figure.

Mr. Smith.—It is checked at the end of each half year.

President.—I am afraid I cannot agree that it is being done correctly, judging by the way you do it. The proper way to do it is this. At the end of the year you ought to weigh your total castings.

Mr. Smith.—We do.

President.—What is the weight of finished castings for 1924-25?

Mr. Smith.—Unfortunately my reports have not been brought up in full. I can merely tell you for the half year.

President.—Which half year?

Mr. Smith.—31st March 1925.

President.—We haven't got the half-yearly accounts. It is no use giving a set of accounts here and there and asking us to compare it with something which we haven't got.

Mr. Smith.—I can only say I will get you the figure.

President.—What I want is the gross weight. Do you weigh all your castings every year?

Mr. Smith.—Yes.

President.—In that do you weigh the rejections including the wasters, risers and heads?

Mr. Smith.—We weigh our scrap which comes in.

President.—I don't mean that. It is a very simple thing I am trying to explain. I want the gross weight of castings. I want to know the weight of wasters and risers. I want the weights of the two things in a year.

Mr. Smith.—We will give them to you.

President.—That is what ought to have gone into this. Any man who goes through this statement will come to the conclusion that you have taken two hypothetical figures, 10 per cent. and 33⅓ per cent. It may be accurate in practice. I don't say it cannot be, but it does not give us correct information.

Mr. Williams.—The only way to get really accurate figures is to have a spring balance weighing machine.

President.—You know the capacity of a ladle. That will give you some idea.

Mr. Noyce.—Would the weight of the ladles vary?

Mr. Williams.—Very little.

President.—Then if you weigh the ladle once, that would do.

Mr. Williams.—That is a very common way of doing it. Until we have a spring balance weighing machine, it will be impossible to tell accurately what the weight is.

President.—So long as you don't get it, it is not quite clear what your practice is.

Mr. Williams.—We can only get it in the final stage.

President.—When will you be able to send us this information?

Mr. Smith.—I should think it would take me a week to get it out.

President.—I want figures for 1924-25 and 1925-26. Without this information, as you will see presently, it is very difficult to work out your works cost.

Mr. Smith.—I quite agree with you there.

President.—Because you may be dividing your total works cost by a totally wrong quantity.

Mr. Smith.—I follow.

Dr. Matthai.—To the extent to which you have verified, can you tell me whether they have agreed with the actuals?

Mr. Smith.—I suppose so. For one half year it was 25 per cent. and for the next half year it was 38½ per cent. In September 1925—I am speaking from memory—it was about 36 per cent. It was high again. As regards March 1926, the accounts have not yet been finished. Consequently the loss has not yet been verified.

President.—According to my calculations, your total metallic charge comes to Rs. 1-11-6 a cwt. Under metallic charge I include scrap, ferro-manganese, ferro-silicon and aluminium. The trouble is that if you take the total quantity as 23,185 cwts. and the total value as Rs. 23,680, it comes to just about a rupee per cwt. of liquid steel. But if you take it on your basis of the estimated outturn which is, in this case, 13,740 cwts. it works out to Rs. 1-11-6 a cwt. Of course from that you have to deduct the scrap realised.

Mr. Williams.—Yes.

President.—The point is this. Here you have got a very great advantage over the foreign manufacturer. Your metallic charge comes only to Rs. 20 a ton, whereas his scrap alone would cost him from Rs. 30 to Rs. 40 a ton.

Mr. Williams.—That is so.

President.—That advantage is lost somewhere.

Mr. Smith.—Our cost is just as high as his. If our scrap price is low, something else is high.

President.—So far as your metal cost is concerned, you have a distinct advantage of at least Rs. 10 to Rs. 20 a ton.

Mr. Smith.—It means something from As. 8 to a rupee per cwt.

President.—Besides, according to your case, you still have to spend more on your cost above materials and so on than the foreign competitor.

Mr. Smith.—Yes.

President.—Then I find the next big item in this part of the works cost is stores. The cost of refractories comes to about Rs. 7,399. If you add that to Rs. 23,680 and deduct the total from the whole grand total Rs. 1,26,000, the balance is stores, which is about Rs. 96,000.

Mr. Smith.—Yes.

President.—That works out to about Rs. 7 a cwt. for stores alone.

Mr. Smith.—It is a very heavy charge. But if you look at it, you will find one-third. . . . . .

President.—Let us take the first lot of stores,—that is all stores except, as I say, refractories and the scrap. Do you check all the stores account with vouchers and everything?

Mr. Smith.—I do.

President.—Do you compare them with the amounts issued?

Mr. Smith.—The system which I go on is this. I take all purchases. The stock is taken at the beginning and also at the end and any large difference is looked into and corrected. The stores do actually, in practice, agree year by year.

President.—How do you charge the stores, at the price at which you purchased or at the market price?

Mr. Smith.—At the average purchase price. Whenever we buy anything more, the average is adjusted.

President.—Does it necessarily correspond with the actual figures at the end of the year?

Mr. Smith.—It should of course in theory, but it never does. There is the wastage, mistakes are made and there are various other things. But I always check down to see that the stock of stores or the actual count at the end of the year agrees approximately with our book balance.

President.—In the works, who is in charge of stores? Who determines the kind and quantity of stores required?

Mr. Williams.—I do. Every indent for stores is put up to me and I examine it and decide whether the quality and quantity of stores asked for are what they should be. Everything comes under my notice.

President.—Would you mind giving us some idea as to what these miscellaneous stores in the slagging material department in Statement A are?

Mr. Williams.—Small quantities of coke, etc.

President.—Coke, you have shown separately.

Mr. Williams.—We also use coke which has been included in miscellaneous stores. There is a separate item for coke which is used for a different purpose. The miscellaneous stores are coke, silica sand, miscellaneous electric gear and various small tools.

President.—In Statement B again there is a heading for miscellaneous stores, which comes to Rs. 10,969.

Mr. Williams.—I think these miscellaneous stores are stores used in the electric furnace department and not necessarily as slagging material.

President.—What kind of stores can these be?

Mr. Williams.—Certain amount of coke, silica sand and various small tools, rabbles and spoons for taking samples, sample moulds, etc.

President.—These stores, I confess, are very puzzling. You strike against them so often and right through these statements. In fact, it is all stores.

Mr. Williams.—If we had given you all the items under miscellaneous stores in detail, the statements would have been much more voluminous.

President.—I am just trying to point out that about Rs. 8 a cwt. for stores is a very big item, including these miscellaneous stores.

Mr. Williams.—You have taken the total miscellaneous stores. What does the total work out to? It really means stores which are not classified.

Mr. Smith.—This miscellaneous stores, I can prove, is miscellaneous stores for liquid steel.

President.—Which miscellaneous stores?

Mr. Smith.—The figure Rs. 9,530-14-0 is included in Rs. 44,235. Therefore it is miscellaneous stores used in the melting department.

President.—That is the total cost of the scrap, refractories and slagging material.

Mr. Smith.—And miscellaneous stores.

President.—The biggest item in this is the moulding composition at Rs. 20 per ton which works out at about Rs. 3-4-0 a cwt. You say you bought it from somebody at Rs. 20 a ton.

Mr. Williams.—It used to cost considerably more than Rs. 20 a ton.

President.—It is stated here as Rs. 20 a ton.

Mr. Williams.—But I am speaking of the original price.

President.—Is it a contract price or what?

Mr. Williams.—No. We ordered, as we required, from them.

President.—Now the price has come down to Rs. 16 a ton.

Mr. Williams.—Yes.

President.—What is this big difference due to?

Mr. Williams.—It is due to the fact that we now make it ourselves instead of buying it. We buy raw materials and make the composition ourselves. The cost of raw materials and of the labour expended in making the composition comes to very much less than we paid before. Up to that time we have not been able to discover a sand for doing the composition work ourselves.

President.—Is this a local sand?

Mr. Williams.—It comes from Rajmahal.

President.—Where is that?

Mr. Williams.—It is 100 miles from Calcutta.

President.—In the moulding composition there is more wastage because you have hand moulding instead of machine moulding.

Mr. Williams.—Probably a little more, not very much.

President.—You have got only two moulding machines.

Mr. Williams.—We have got two machine moulding plants and 8 or 10 hand-worked machines.

President.—I mean power-worked.

Mr. Williams.—Do you mean pneumatic?

President.—Yes, you have got only two of these.

Mr. Williams.—Yes.

President.—What does one of them cost?

Mr. Williams.—It is no use considering the machine itself. You have got to take into consideration other things. To work that machine you require a motor, an air compressor and tubes which carry the compressed air to the machine. Speaking from memory, it is about Rs. 30,000 excluding the motor which is another Rs. 1,750.

President.—Don't you require a compressed air installation for other purposes in your works?

Mr. Williams.—We have put down that.

Mr. Smith.—I think what you want to know is how much it would cost us to add on to our present plant.

President.—What I saw in your works was that there was too much of this manual work and it seemed to me that there was wastage of labour as well as of materials in that.

Mr. Williams.—I see your point.

President.—It does seem to me that this charge for moulding composition which worked out in 1924-25 at Rs. 3-4-0 a cwt. and which is now reduced to Rs. 2-5-0, because of the drop in the price, is still on the high side.

Mr. Williams.—I admit that it is high. It is a thing to which I have given a great deal of attention. I have tried my best to reduce it. It is a very difficult matter to get Indian workmen to economise in the use of stores which are used in very large quantities. Unless we can devise some means of limiting the amount to a certain extent per cwt. of casting, they will continue to throw it about and mix it up with other sand.

President.—You use about 3 cwts. per each cwt. of casting?

Mr. Williams.—Yes.

President.—That is very high.

Mr. Williams.—It is very high. It is a thing which caused me more anxiety than anything else. So far we have not been able to devise means of cutting it down.

President.—Supposing it was cut down, how much do you think you could cut it down to?

Mr. Williams.—It should come down by at least a third. That is what we are aiming at.

President.—It would bring down your cost by a rupee or so.

Mr. Williams.—Yes.

President.—You have got the machine shop and there you have got another lot of stores. What are these stores? I don't want all the details, but I just want to get some idea.

Mr. Williams.—Tool steel, mild steel, belting, saws, etc.

President.—Is this a machine shop for machining your castings? I understood you to say that some of the castings are not machined by you at all.

Mr. Williams.—We do very little machining. This is for cutting off the risers.

President.—It would be used for repairs also.

Mr. Williams.—Yes. But the saws for the cutting of risers are also a very big item.

President.—Then the next biggest item after this is welding department stores.

Mr. Williams.—At that time we were using oxy-acetylene. We bought the oxygen and made the acetylene. It is the cost of oxygen which is the principal item.

President.—How did you buy it?

Mr. Williams.—We bought it in cylinders. At that time it was costing us very much. Consequently we decided to put down our electric welding plant.

President.—Would you give me the figure for welding for 1925-26?

Mr. Williams.—Rs. 4,935 against Rs. 22,000.

President.—That saved you nearly Rs. 18,000.

Mr. Williams.—Yes.

President.—That is equal to a saving of Rs. 1-4-0 a cwt.

Mr. Williams.—Yes.

President.—I think that finishes the stores part. Out of this you have got to deduct the scrap recovery.

Mr. Williams.—Yes.

President.—You have taken what you consider to be the market price of scrap.

Mr. Williams.—Yes.

President.—As regards quantities, you have taken 33⅓ per cent.

Mr. Williams.—Yes.

President.—You have put in under repairs a sum of Rs. 13,515 which apparently was not originally part of your cost accounting system.

Mr. Smith.—That is because you asked for it.

President.—In what part of the statement does it go in? It must appear in the one or the other of these statements.

Mr. Smith.—It must be in Statement B.

President.—Statement B is summarised in the cost over material in item 2 of your letter of the 12th May 1926, where you say repairs and relining, etc., are included in general works cost, and therefore they are not there. You can send it to me afterwards. I have wasted a lot of time over it.

Mr. Smith.—You will find a lot omitted.

President.—What have been omitted?

Mr. Smith.—From magnesite bricks down to miscellaneous stores. Those have been omitted in this, because they are under works cost material. If you add these four items, *viz.*:—

	Rs.	A.	P.
Magnesite bricks	936	0	0
Silica bricks	553	14	9
Fire clay	1,057	0	0
and			
Miscellaneous stores	10,969	0	9

you would get exactly Rs. 13,515-15-6.

President.—You put that in Statement B and then you say in your letter that it is in the other.

Mr. Smith.—They have included it under Rs. 1,39,799-2-6.

President.—So long as you have got it, it doesn't matter where.

Dr. Matthai.—The President was comparing the costs of 1924-25 and 1925-26. I find taking your summaries for the two years the net material cost in

1925-26 is about Rs. 1·4 per cwt. less than in 1924-25 and I take it that is very largely due to a fall in the prices of materials.

Mr. Smith.—It is due to the fall in the price of our moulding composition.

Dr. Matthai.—And of coal?

Mr. Smith.—Not so much.

Dr. Matthai.—It is due largely to the moulding composition and a few other small items in the welding department.

Mr. Smith.—Welding and moulding would cover that.

Dr. Matthai.—What I want to get at is this. I don't find that there is any substantial difference in the output between the two years. It is only a difference of 400 cwts. Therefore the saving you have been able to make in the materials is largely due to market conditions.

Mr. Williams.—And to the introduction of various economies.

Dr. Matthai.—Yes, but what I want to be quite clear about is whether it is due mainly to market conditions.

Mr. Smith.—It is largely due to economies, the greatest point being undoubtedly our moulding composition.

Dr. Matthai.—Therefore the fall is mainly due to economies.

Mr. Smith.—Yes. The other big fall is in the welding department which again is entirely economy.

Dr. Matthai.—There is just one small point which I don't understand. In 1925-26 except in the last month or two you have no entry at all against gas coke. In 1924-25 practically every month you have an entry.

Mr. Smith.—I noticed it when I was up here. Probably we got in an invoice which was debited to the particular head instead of doing it in small amounts. Gas coke would be entirely used in the moulding department.

Dr. Matthai.—If your explanation were right, there would be a very large item in some particular months of the year, wouldn't there be?

Mr. Smith.—One would expect that.

Mr. Williams.—I think I can explain that to a certain extent. Formerly we heated our ladles with gas coke. We always found that we could not get sufficient heat and we substituted coal. That would account for the big reduction.

Mr. Noyce.—The cost of ferro-manganese has come down by Rs. 100 a ton. To what is that due?

Mr. Williams.—We bought the first lot when all prices were about the peak. The prices of converting were very high.

Mr. Smith.—It came out very early in the day.

Mr. Noyce.—Do you import ferro-manganese and ferro-silicon?

Mr. Williams.—We are able to get them sometimes locally.

President.—Tata's do make ferro-manganese.

Mr. Williams.—They are not willing to part with it and I don't think they have very much to spare.

Mr. Noyce.—It would seem from these statements that prices have remained very constant for all your raw materials. Is that because you have got large stocks, or because prices have actually been very steady? In the case of at least four items out of five in the statement, the prices have remained the same throughout the two years.

Mr. Smith.—Because we bought, when we started, very large stocks, which we are still using.

Mr. Williams.—In the case of borings we have running contracts for the supply of so much per month at a flat rate.

Mr. Noyce.—Why have you shown two separate items under steel scrap as steel scrap miscellaneous and steel borings?

Mr. Smith.—There must have been a lot of miscellaneous scrap purchased. I noticed it after I had come up.

Mr. Noyce.—There has been a fall in the price of lime of Rs. 20 a maund. Where do you get that from? Do you get it locally?

Mr. Williams.—Yes, from Sylhet.

Mr. Noyce.—In 1925 there is an item of Rs. 6,991-0-6 under the miscellaneous stores shown below moulding composition. In the first half of 1925-26 it is only Rs. 455. What is that due to?

Mr. Williams.—Personally I should think it was due to closer allocation.

Mr. Noyce.—What stores are these?

Mr. Williams.—Moulders' tools, plumbago and certain kinds of moulding sands which we use in addition to the silica sand in the moulding composition.

Mr. Noyce.—Would these miscellaneous stores be used in the production of your own composition?

Mr. Williams.—Yes.

Mr. Noyce.—When did you start making?

Mr. Williams.—Sometime in the latter half of 1925.

Mr. Noyce.—It seems to me that if the cost of your moulding composition went down by some Rs. 22,000, and if you started making it yourselves, that is obviously sufficient reason for the miscellaneous stores being high.

Mr. Williams.—They have dropped.

Mr. Noyce.—They have dropped by over Rs. 6,000 a year.

Mr. Williams.—This is only for a half year.

Mr. Noyce.—That is so. They went up again in the second half of 1925-26.

President.—It is a big jump from Rs. 454 to Rs. 7,400. In 6 months it amounts to more than what you have spent in the previous 12 months.

Mr. Smith.—I cannot account for it. Would you like us to send you the information?

President.—Yes.

Mr. Noyce.—Is it possible for you to work out a sort of average figure as regards the cost of your requirements of stores?

Mr. Williams.—Yes.

Mr. Noyce.—In Statement B you give the net works cost of finished castings per cwt. as Rs. 26-5-7. In your covering letter of 12th May 1926, you give the cost as Rs. 26-8-6. There is not very much difference between the two figures, but still it is curious that there should be any difference at all.

Mr. Smith.—I can tell you the reason for that. This letter was written first of all from my audited accounts which showed the actual stores after adjustment of differences. The other was made out from the stores issue sheets—the only place where we could get it. The small difference has been written off as not being accounted for.

Mr. Noyce.—Which is the final figure?

Mr. Smith.—Rs. 26-8-6 is the final figure.

Dr. Matthai.—If this reduction in the cost of materials is largely due to economies, which you have introduced, we might take the 1925-26 figures rather than the earlier figures as the figures of your future costs.

Mr. Williams.—Absolutely. We hope to improve still further.

Dr. Matthai.—At any rate it cannot go above that.

Mr. Williams.—No.

Cost above materials.

President.—With regard to the next item, cost above materials, would you refresh my memory about the figures you gave me of the total number of units you would require per ton? I want figures for 1924-25 and 1925-26.

Mr. Williams.—1924-25—1,072 units per ton including all the electric gear.

President.—What was the flat rate?

Mr. Williams.—As. 1·25 per unit.

Mr. Noyce.—When did it come down to ·91 of an anna?

Mr. Williams.—At the beginning of our financial year 1925-26.

President.—What was the rate in 1924-25?

Mr. Williams.—It is very difficult to give you a figure.

President.—That was the reason why I wanted an average figure.

Mr. Williams.—We will send it to you later on.

Mr. Noyce.—The point is that your works cost for electric current is practically the same for 1924-25 as for 1925-26 and yet you say that there has been a reduction in the rate per unit. Your total outturn is very much the same.

Dr. Matthai.—The difference in electric current between the two years is exactly Re. ·3 per cwt.

President.—At the rate of As. 1·25 per unit it comes to roughly Rs. 80 a ton. That you say is for a ton of liquid steel.

Mr. Williams.—Yes, that is for liquid steel.

President.—It cannot be right. At that rate it would come to Rs. 80,000 for current.

Mr. Williams.—If you would permit me, I should like to send you the figure later on.

Mr. Noyce.—You say that the unit rate varies from month to month according to the quantities used.

Mr. Williams.—Yes.

Mr. Noyce.—It seems an unsatisfactory arrangement to allow the rate to vary. The Calcutta Electric Supply Corporation do not vary their charges for household consumption.

Mr. Williams.—But they do to industrial concerns according to the amount used. It is a gradual fall from As. 1·25 to A. ·91. That is why I said I should like to give you the rate per month later.

President.—Your total electric current in the year 1924-25 is Rs. 67,576. Out of that for smelting only it is Rs. 50,721.

Mr. Williams.—Yes.

President.—That works out for finished castings at about Rs. 3-14-0 a cwt. or Rs. 77 a ton.

Mr. Williams.—Yes.

President.—That is roughly equivalent to 7 tons of coal.

Mr. Williams.—I don't think it is right to take it in tons of coal.

President.—I am pointing out that it is a very large item.

Mr. Williams.—When you speak of coal you have got to take into consideration the cost of converting that coal into a heat unit. The only way to make a fair comparison would be that so many units of electricity are used in the furnace at so much per unit and so much producer gas has to be produced at so much.

President.—Why should you start from producer gas? You start from coal.

Mr. Williams.—That won't be a fair comparison.

President.—I am just trying to point out that it strikes me that this process of yours appears to be much more expensive than it ought to be.

Mr. Williams.—It is not more expensive if you compare it with the way in which other countries are working.

President.—It may be that in a small furnace you may use a little more coal, but you will see that there is a great deal of difference between 2 tons and 7 tons.

Mr. Smith.—Have you any cost figures for Tata's?

President.—It is generally known that for very inferior quality of coal, such as Indian coal, they use 4 tons of coal for one ton of finished steel about 2 tons of which are used for pig iron and the remaining two tons are from pig iron to finished steel. In a smaller converter I am prepared to admit that the consumption may be more, because the larger the production the less is the consumption. I am trying to point out that there is a good deal of difference between 2 tons and 7 tons and I am simply talking of the relative costs of the two processes.

Mr. Williams.—What I think you are doing is you compare the cost of making the quality of steel which we manufacture with ordinary mild steel.

President.—I am doing nothing of the sort. I can understand this, if you are able to show that you are getting any higher price because of the electric process than other people do for an ordinary basic converter casting that competes against you. It has not been shown anywhere.

Mr. Williams.—A good many British standard specifications lay down that steel must be made either in an acid open hearth furnace or in an electric furnace and they very often will not accept basic converter steel.

President.—Take the acid open hearth furnace. It doesn't take much more coal.

Mr. Williams.—You cannot compare a ton of coal with so many units of electricity.

President.—I agree.

Mr. Williams.—Before we go to use coal we require a very expensive plant and expensive labour. When you compare the two, you must take all these into consideration.

President.—Do you mean the cost of converting coal into power?

Mr. Williams.—Yes. Have you any figures to show the cost of conversion of coal into power?

President.—I couldn't give you any definite figures just now.

Mr. Williams.—It would certainly be less, but then it is expected to be less, because of the quality of steel.

Dr. Matthai.—It is recognised that when you make electricity out of coal a great deal of the coal is wasted, that is to say, supposing you derive power directly from coal, instead of using coal as a raw material for the generation of power, as in the case of electricity, a great deal more of coal would be used than you would use if coal were used directly as power.

Mr. Williams.—I am not prepared to argue that. But I do know for comparison you must take into consideration the cost of converting coal into a heat unit.

Mr. Noyce.—The chief consideration you have got to take into account is that Tata's convert their own coal for the purpose for which they use it. Here you have got to pay the middleman's profit of the Calcutta Electric Supply Corporation.

Mr. Williams.—The reason why we cannot do that is that a small power plant cannot compete with a very large one. It can be done and there are foundries in England who do it.

President.—There are very few electric foundries in England. In Belgium there are only three.

Mr. Williams.—But in America there are many.

President.—The principal competing countries are Belgium and United Kingdom where the proportion of electric furnaces is small.

Mr. Williams.—Yes.

President.—It shows that it is not a very economical process. It amounts to this that you pay the price of 7 tons of coal in order to produce the equivalent power.

Mr. Williams.—I don't say that. There is another point and that is if the electric process is not economical, how is it possible that people like Edgar Allen & Co., Sheffield, have one of the most up-to-date furnaces and use it. They not only use it, but they are able to compete.

President.—It all depends on the conditions in which a particular industry is carried on. I am simply trying to get information. My point is that one of the reasons why you are not able to compete may be that you are probably using a more expensive process of manufacture. This is partly shown by the fact that even in Belgium where electricity is said to be cheap for industrial purposes, there are only three electric furnaces as against several others which use the ordinary converter process. The same applies to the United Kingdom. I don't attach very much importance to the United Kingdom, because electricity is dearer there than in Belgium.

Mr. Williams.—At the same time we are in competition with people who use electricity.

President.—I am only pointing out to you the point that struck me. You put down for steam coal in 1924-25 a rate of Rs. 12 per ton. How did you get that rate? What steam coal were you using?

Mr. Williams.—Deshergarh. It is a special quality—dug up in large lumps—for which they charge a higher rate.

President.—So far as I remember in 1924-25 Rs. 6-8-0 was probably the price in the collieries.

Mr. Smith.—A good bit of our coal also comes from Raneegunge. This is the price actually paid at our works.

President.—It does seem a fairly heavy rate. Now as regards labour you call it "workers' wages."

Mr. Smith.—Yes.

President.—In 1924-25 the total charge under labour was Rs. 1,21,249 which was reduced to Rs. 1,12,309 in 1925-26. What was this difference due to?

Mr. Williams.—It was probably due to more machine moulding which requires less expensive labour.

President.—What is your total labour force?

Mr. Williams.—Approximately 300.

Mr. Smith.—Towards the end of 1926 we managed to get a contractor to take over our factory labour. It is now being done cheaper than we could do it ourselves.

President.—Do you consider that as a permanent reduction?

Mr. Smith.—That will be a permanent reduction.

President.—The incidence per cwt. in 1924-25 was about Rs. 8-12 and in 1925-26, Rs. 8. It is a very big amount.

Mr. Smith.—We think that there will be still further reduction as more labour-saving appliances are used. This contract system we propose to extend to the moulding department as well as to the welding.

President.—If you have a labour strength of 300 and you turn out 13,000 cwts. in a year, the output is very small. It is about 2 tons per head a year. It is the smallest output I ever saw.

Mr. Williams.—That is taking into consideration all our cooly labour. They are not all moulders. Only less than half of them are moulders.

President.—How much direct labour you would say you had inside the works?

Mr. Williams.—About 150.

President.—How many moulders you say you have?

Mr. Williams.—Approximately 100 including boys. We have 20 boys.

President.—Under the head 'General Works Supervision' I see that the wages of European section have fallen from Rs. 21,688 to Rs. 12,517. Is that a permanent reduction or is it only temporary?

Mr. Smith.—I think it will be permanent.

Mr. Noyce.—In September 1924 how many Europeans had you?

Mr. Williams.—Three.

Mr. Noyce.—The wages of Europeans in the month of September 1924 came to Rs. 3,206 and afterwards they settled down at Rs. 900 odd.

Mr. Smith.—September would be high, because you would get the man's passage home in that.

Mr. Noyce.—Mr. Williams, your salary is included in overhead charges, I think.

Mr. Williams.—Yes.

President.—Your works cost above materials in 1924-25 was Rs. 17-11-0 and in 1925-26 about Rs. 16-11-0. That you consider to be more or less a permanent drop.

Mr. Williams.—Our Indian foreman moulder seems to be making good. He has been on trial for the last six months.

President.—The difference of Rs. 2-13-0 between the two total works costs is mainly accounted for, by material Rs. 1-12-0, labour about Re. 0-12-0 and supervision about Re. 0-5-0.

Dr. Matthai.—I find under power what has happened in 1925-26 is that a slight reduction that you are able to get in electricity is exactly counterbalanced by the slight increase under fuel.

Mr. Williams.—The two have nothing to do with each other.

Dr. Matthai.—I am trying to balance increases against decreases. Taking labour, there is of course a considerable reduction of Rs. 1-8-0 per cwt. of finished casting and in supervision, as the President pointed out, you have a considerable reduction under European supervision. I find that you are trying to explain the reduction in labour costs entirely on the ground of machine moulding and the system of contract. Is any part of that reduction due to the fact that your labourers are now able to do their work better? You have been working now for three or four years.

Mr. Williams.—Decidedly.

Dr. Matthai.—When you answered the President's question, you made no reference to that at all. Before I heard your explanation, that was the line I should have been inclined to take.

Mr. Smith.—Personally, speaking only as an accountant, I think the capability of the labour has been more or less stable in March 1924 and 1925, but Mr. Williams is much better able to judge this.

Dr. Matthai.—I find that there is a slight increase in the cost of Indian supervision and a considerable decrease in the cost of European supervision. Is the decrease in supervision as a whole due to the fact that there is now less European supervision as you are substituting Indian supervision for European supervision which is less expensive, or is it due to the fact that your labour being more capable, it can do with less supervision? Either it is less expensive supervision or it is less supervision altogether, do you see my point?

Mr. Smith.—We probably have the same number of supervisors as before.

Dr. Matthai.—You have no decided view as to the part played by the need for supervision.

Mr. Williams.—I have a very decided view. I don't think we can do with less supervision at any time. It may be less expensive, but not less supervision.

Dr. Matthai.—In your works, does it happen that in the first half of the financial year the output is less or greater than the second half year?

Mr. Williams.—When the railways start on their financial year, they begin to place their orders.

Dr. Matthai.—It has nothing to do with the weather.

Mr. Williams.—Nothing.

Dr. Matthai.—In the case of Tata's there is a very perceptible difference between the cold weather and the hot weather in the matter of output.

Mr. Williams.—It doesn't affect us one way or the other.

Overhead charges—Depreciation.

President.—We shall go on to the next item, *viz.*, overhead charges which include depreciation, interest on working capital and head office expenditure. I want to explain to you first of all that in this question of depreciation, we shall have to determine the block value of the plant. Before coming to that I should like to explain to you that your plant as laid out is capable of producing 6,000 tons of liquid steel or 4,500 tons of castings. But your production has not reached that figure. Now there are two alternatives. One is that we must determine the value of so much of your block as contributed to the production of your output which is a very difficult business. We did this to a certain extent in dealing with Tata's costs in 1921-22 and found it very difficult. In a smaller concern such as yours, I don't think I should apply that principle—here I am speaking for myself. The other principle is this: in allocating the amount of depreciation, as you have not reached your full output, we must take some intermediate figure which would be some sort of figure between your total capacity and your present output. Supposing that in five years or ten years or whatever the period may be, you reach your full capacity, we shall have to take some intermediate figure for the first year, second year, third year and so on.

Mr. Smith.—The amount of depreciation which you are prepared to allow is a fair depreciation?

President.—We have either got to estimate the value of the block which you require for your present output—you don't expect a part of the production to earn the profit and the depreciation on the whole capacity of the plant, which is not expected in any business—or we must take some intermediate figure and give you a rate of depreciation per cwt. on that intermediate figure. We shall take, for the sake of argument, 2,000 cwts. as your present production, 5,000 cwts. being your full capacity. The total depreciation comes to so much. We divide it by 5,000 and allow you so much per cwt. As your production increases, you will be able to earn more—that is the line I am proceeding on.

Mr. Smith.—I should like here to put forward a point that, with the exception of our electric furnace, I think we are using the whole of our plant; in other words, if we are to bring our production up to the full capacity of our furnaces, we shall have to buy more plant. It is only in the electric furnace that we have any excess capacity over our output.

President.—You have got a bigger plant which is obviously intended for a much bigger output. I am asking you as a business man, what you would do in that case. Surely you don't expect a part of the business to earn the whole of the depreciation and profit on the entire plant. This is the principle on which I am working.

Mr. Smith.—I perfectly agree with your point of view. We merely do so in our accounts because of financial considerations more than anything else. It would certainly be unfair to burden the works costs with the whole depreciation of a plant which is not working.

President.—If you follow my principle, I think the result will be more or less the same.

Mr. Smith.—What you intend doing is, if you allow us, just for the sake of argument, 10 per cent. depreciation on the whole of our capacity which is, say, 20,000 units, you propose, if we are only doing 10,000 units, to give us 5 per cent.

President.—That is right. In allowing for depreciation; we proceed generally on the replacement value of the plant. There is no other way. We

determine your block value and then we allow a rate of 6¼ per cent. You will have to make out a very strong case to make us alter that figure. 6¼ per cent. roughly approximates to your actual figures. There is a difference of only Rs. 6,000.

Mr. Smith.—I don't quite follow you.

President.—At 6¼ per cent. it is only about Rs. 5,000 or Rs. 6,000 less than what you have claimed. Therefore we are not going to alter that. In every industry we have enquired into, all have agreed that it is a reasonable rate. It is more than the income-tax people allow you.

Mr. Smith.—In a case like ours, the income-tax people allow 7½ per cent.

President.—It is not worth while in this case for the sake of Rs. 5,000 or Rs. 6,000 to alter that. The rate of 6¼ per cent. is the mean of 4 different rates, *viz.*, 2½ per cent., 5 per cent., 7½ per cent. and 10 per cent. We have tested this in most of our enquiries and we have found it reasonably correct.

Mr. Smith.—It is a perfectly fair rate.

President.—Up to 1923 your total block value was Rs. 7,15,644. You have not allowed anything for depreciation against 1923, though the plant had been working for two years.

Mr. Smith.—It was not working. It was in the course of construction.

President.—No, it was started in 1922.

Mr. Williams.—Only in a very small way.

Mr. Smith.—It is true that we were working, but it was entirely experimental, doing about one heat in 4 days.

President.—For that reason for three years I am taking one year's depreciation which will roughly come to Rs. 44,650. Then in 1923-24 the value of your plant has been increased to about Rs. 9,60,000. Depreciation on that will be Rs. 60,000. Then again in 1924-25 you have increased your block value to Rs. 10,08,175. Depreciation on that will be Rs. 63,000. If you deduct the depreciation, your block value comes to Rs. 8,40,000, but that is not necessarily your replacement value. The replacement value of your plant you have given as 60 per cent. That 60 per cent. is 60 per cent. of the total block value without depreciation?

Mr. Smith.—Undoubtedly.

President.—Your replacement value then becomes Rs. 6,00,000. What it means is this that your plant has depreciated by the drop in value alone apart from depreciation by the difference between Rs. 8,40,000 and Rs. 6,00,000. That is what I think you ought to write off, isn't that so?

Mr. Smith.—I follow your point.

President.—We are dealing just now with general principles. First of all, as I have told you, we can only deal with the replacement value of the plant.

Mr. Smith.—Of course there is no argument left.

President.—You don't expect in any scheme of protection you will be allowed to make up your past losses.

Mr. Smith.—I don't consider this as loss. Although we value it at 60 per cent. now, owing to a rise in price, it may be 80 per cent. next year.

President.—That is your look-out. In allowing for depreciation, we must take the replacement value. That is what we have done in every case as far as possible. If you refer to our Steel Report, for instance, you will find that we wrote down the cost of the Greater Extensions from Rs. 15 crores to Rs. 10 crores.

Mr. Simth.—If that is the usual scheme of the Board, I don't wish to argue the point.

President.—Is there any other way of doing it at all?

Mr. Smith.—We will leave it at that.

President.—What I was suggesting to you was that if you wrote down Rs. 2,42,000 in 1924-25. then from that date your depreciation would be on the replacement value.

Mr. Smith.—6¼ per cent. on Rs. 6,00,000.

President.—In 1925-26 the book block value is Rs. 10.76.643 and 60 per cent. of that is about Rs. 6,46,000 which is the replacement value. These are the data on which we have to work.

Mr. Smith.—Yes.

President.—What it comes to is this: that you have to write off about Rs. 2,40,000 and start afresh. That money is gone. You are not the only firm that has appeared before us . . . . .

Mr. Smith.—We have been luckier than most.

Mr. Noyce.—In calculating depreciation, you have, I take it, calculated on prime cost. Taking the first figure at 100, you have calculated your depreciation on 100 throughout.

Mr. Smith.—Yes, the Board allow that.

Dr. Matthai.—How did you estimate the replacement value of your plant at 60 per cent.?

Mr. Williams.—It is based on a number of typical prices which are current for a plant of our type.

Working Capital.

President.—The next item is interest on working capital. I have not been able to find out what your working capital is. What you have done is simply this. You have taken the total investment. From that you have deducted the depreciated value of the plant and the remainder you call working capital. That is not at all right. It includes the depreciation fund. It includes any losses that you may have sustained. What I am going to suggest to you is this. There is a much simpler way of determining it. On how many months' turnover ought you to have working capital? Speaking for myself, I should think not more than six months' total works cost as a reasonable amount for your working capital.

Mr. Smith.—Would you take any typical six months?

President.—No, any six months will do. The total of your six months' works cost will be Rs. 1,80,000 or in round figures Rs. 2,00,000. But from the way in which you have worked out, you can never be right.

Mr. Smith.—I have arrived at it this way:

	Rs.
Stock of finished goods	60,000
Stores	87,000
Outstandings	1,33,000
TOTAL .	2,80,000

You say you will allow us six months' works cost for our working capital. I think it is a perfectly fair basis to take.

President.—Then again you have taken 12 per cent. as interest on working capital and the return on your capital. We must separate the two for the moment. We have allowed, in the case of other firms, 7½ per cent. for working capital which, I think, is fairly above the Bank rate. A big firm like Hukumchand's would get money at a very much lower rate. We are not concerned with any particular firm. We think any firm which is of importance to make out a case for protection ought to be able to get money for working capital at not more than 7½ per cent. That is what we have allowed in every enquiry so far and they have never claimed more.

Mr. Smith.—I don't quite agree. A firm with a good balance sheet can borrow money at 7½ per cent. easily. I don't really see why you should employ the exact amount at which they can borrow.

President.—I don't say they do. Most of them borrow it for less. One firm actually borrowed at 5½ per cent. We calculated at the rate of 7½ per

cent. An industry which is unable to borrow working capital at 7½ per cent. is not an important enough industry. That is what I would suggest.

Mr. Smith.—Not necessarily in the case of this industry. If we were not connected with Sir Sarupchand I doubt whether we could borrow anything.

President.—The question arises where did you borrow the capital from?

Mr. Smith.—From Sir Sarupchand Hukumchand.

President.—Then you can borrow at 6 per cent.

Mr. Smith.—12 per cent. is only a book entry.

President.—If he is lending you at 6 per cent. he will probably be able to borrow it at much less.

Mr. Smith.—It rather took me by surprise that you took the working capital as being necessarily the cheapest that you borrow.

President.—One firm actually got it at 5½ per cent. In your case the position is this that if you had written down your depreciation, you would not have had to borrow anything at all. As it is, you may be getting a present of 7½ per cent. Really speaking in your case depreciation is merely a book entry.

Mr. Smith.—Quite.

President.—Therefore I don't suggest that you shouldn't get it. In the depreciation you have got about Rs. 2,50,000 which may well be used for working capital. 7½ per cent., having regard to that factor, is not a small rate.

Mr. Smith.—No.

Head Office Expenses.

President.—The next item is the Head Office expenses which in 1925-26 work out nearly to Rs. 5,000 a month. In Statement E you have a column for management. What does that mean?

Mr. Smith.—It means all the various charges which we incurred. It includes our rent and taxes out at Ballygunge and our Ballygunge Office establishment as well. Those are the two chief items.

President.—What do the taxes come to?

Mr. Smith.—Rent and taxes came to Rs. 5,700 in 1924-25. Ballygunge establishment—clerical establishment and durwans—came to Rs. 10,500 and printing and stationery Rs. 1,900.

President.—Is it a rented office?

Mr. Smith.—We don't pay anything.

President.—It does seem fairly high.

Mr. Noyce.—Why did head office expenses go up last year by nearly Rs. 7,000?

Mr. Smith.—We have started advertising again, that is one thing. We have had a very expensive tour throughout India, which Mr. Williams did, in order to see our more distant customers and we had another one up to Lucknow. These are the only items which I can account for. There also has been a general rise all round.

President.—It seems to be rather on the high side. It works out at about Rs. 3-12-0 a cwt.

Mr. Smith.—It is rather on the high side, but in the case of an entirely new business like this where we have to push our wares, it is likely to be, to my mind, on the high side in the initial stages.

President.—There may be some reduction in course of time.

Mr. Smith.—I am hoping to see it reduced in course of time.

Mr. Noyce.—What you have got to see reduced is the proportion and not the total amount.

Mr. Smith.—We hope to be able to double our turnover with no more expenditure. I don't see why it shouldn't be done.

Manufacturer's profit.

President.—You have now to add on the manufacturer's profit. You are claiming 12 per cent. on the whole of your investment including your depreciation, your losses and everything.

Mr. Smith.—Yes, less losses.

President.—Your capital invested in the industry is the equivalent of your present assets or do you claim anything more?

Mr. Smith.—No.

President.—The only thing that remains is the rate. In the previous enquiries in the case of Tata's we allowed 10 per cent. on the ordinary share capital. In your case there is no other form of capital.

Mr. Smith.—It is all ordinary capital.

President.—They were allowed an average rate of 8 per cent. on the whole of their capital. There is the 10 per cent. ordinary rate and there is the 8 per cent. all round rate. The all round rate is worked out this way. Certain amount of capital may be in preference shares and debentures which may carry 7 to 8 per cent. interest. Here I may say Tata's second preference shares carry 7½ per cent. interest. That is how the 8 per cent. was arrived at. I want to know what your views are and which figure you fancy.

Mr. Smith.—I fancy in that case 10 per cent. I think we are entitled to have 10 per cent. seeing that all our capital is ordinary capital. My reason for that is that in the case of a business starting in this way, I don't think, until the business had reached a certain stage, that it would be possible to borrow in preference share capital.

President.—Then I take it that you claim 10 per cent.

Mr. Smith.—Yes.

President.—The only other point that remains is by what production is it to be divided. In the past four years your production has gone up by about 500 cwts. a month. Supposing it was a scheme of five years, then in the next five years your production would go up by 2,500 cwts. It takes you five years to reach it. I must take the average production for five years. It is quite obvious that your present production is too small.

Mr. Smith.—I think the average figure should not be much above our present output because, as I say, except in the case of our electric furnace, we haven't got much excess capacity left.

President.—The actual figure may be somewhere in the neighbourhood of 20,000 cwts. or 1,000 tons.

Mr. Smith.—That is a fair figure to take.

President.—That is an incentive to you to increase your production, because the more you produce, the less will be your overhead charges and you suggest that would be a fair figure.

Mr. Smith.—Yes.

President.—As regards the works cost I forgot to put a question. In making an estimate of the forecast for the next five years, you have yourself given us a figure of Rs. 2 odd reduction for overhead and supervision.

Mr. Smith.—I suggest an all round reduction of Rs. 2.

President.—That is including overhead and supervision.

Mr. Smith.—Yes. We estimated that we could save another Re. 0-14-6 in our works cost.

President.—Having got the works cost, overhead charges and manufacturer's profit, if we made a reduction of Rs. 2 per cwt. every year and took an intermediate figure as regards production, would that meet the case?

Mr. Williams.—I think it would meet the case very well indeed.

Dr. Matthai.—I want to ask one or two questions about working capital. We have been suggesting that you might take an amount corresponding to the turnover of certain number of months. Now in trying to fix what the period is to be, I should like to know a few things. You are producing against orders, aren't you?

Mr. Williams.—Yes.

Dr. Matthai.—Therefore it is not likely that you would have to finance any very considerable amount of stock.

Mr. Smith.—We do as it happens.

Dr. Matthai.—For example your output for 1925-26 is roughly 14,000 cwts. and your turnover is 12,916 cwts.

Mr. Smith.—I haven't got the turnover figures for 1925-26.

Dr. Matthai.—Have you got it for 1924-25?

Mr. Smith.—Yes.

Dr. Matthai.—I want to know the quantity of finished castings made in 1924-25.

Mr. Smith.—13,740 cwts.

Dr. Matthai.—What is your turnover?

Mr. Smith.—13,838 cwts.

Dr. Matthai.—Practically the whole of your output was sold in that year.

Mr. Smith.—Yes.

Dr. Matthai.—The need for working capital is not so great in the case of a firm producing against orders.

Mr. Smith.—You are not absolutely correct. The process itself is quite a long one. No casting gets out under a fortnight. In the case of Government contracts and most of the railways we have got to have the castings examined by the Controller of Stores.

Dr. Matthai.—What time does that take?

Mr. Smith.—We have to keep in stock until it is worth his while to come down and inspect. He won't come down to inspect one axle box at a time. He would come to inspect only, say, 500 boxes at a time. Then we do occasionally manufacture anvils, etc., for stock.

Mr. Williams.—We also occasionally accept orders in which they lay down that so much has to be supplied immediately and so much when they call for them. You see actually our stock of saleable articles on the 30th September 1925 was Rs. 60,000 and in March 1925 it was Rs. 54,000. These have to go through the shops.

Possibility of savings.

Dr. Matthai.—With regard to raw materials, most of your raw materials are obtained locally.

Mr. Smith.—Yes.

Dr. Matthai.—If you had to obtain the bulk of your materials from abroad, it would be necessary to keep a large stock, isn't that so?

Mr. Smith.—Yes.

Dr. Matthai.—To that extent you are in a position of advantage as compared with an industry which has got to obtain its raw materials from abroad.

Mr. Smith.—Yes.

Dr. Matthai.—What would be the percentage of stores that you would be able to obtain locally as against stores imported from abroad?

Mr. Williams.—90 to 95 per cent. are obtained locally.

Dr. Matthai.—In the case therefore of your raw materials and stores, would it really be necessary for you to keep more than, say, 3 months' stock?

Mr. Williams.—No. Three months' would be quite fair average.

Possibility of savings.

Mr. Noyce.—On page 6 of your representation of 19th April 1926, you say that other savings are also possible with a larger output, such as reduced electric power consumption, fewer repairs to furnaces, etc., and that these would probably account for a further saving of Re. 1 per cwt., that is, on an outturn of 2,400 tons a year.

Mr. Williams.—Yes.

Mr. Noyce.—Your output of 1925-26 is very little more than your output of 1924-25. Still you have managed to reduce your works charges by Rs. 2-4-10 altogether.

Mr. Smith.—On account of electricity.

Mr. Noyce.—No, moulding composition, general savings, etc. Surely one rupee a cwt. is a very moderate estimate of the savings you are going to effect on an output of 2,400 tons a year.

Mr. Smith.—The one rupee mentioned there is a particular saving which we expect to make by increasing our output. The amount which we have saved between March 1925 and March 1926 is due to economies effected by buying our stores in a better manner and not to increased output.

Mr. Noyce.—Do you consider that the limit of saving has been reached in that direction?

Mr. Smith.—I think it probably is. There may be a little further saving on labour as they gradually get more efficient.

Mr. Noyce.—A saving of Re. 1 a cwt. on Rs. 23 a cwt. seems very small.

Mr. Smith.—This is on works cost only. I have made it up by anticipating a saving of 20 per cent. on our electric power which would give a saving of Rs. 47 per cwt. We expect to save ·13 on liquid steel European establishment. That gives a total of ·60 on our liquid steel or ·90 on our finished product.

Mr. Noyce.—Surely you won't spend four times as much on workers' wages, will you?

Mr. Smith.—I don't see why we should not, unless of course we get them to work more efficiently than they have been doing so far. If we double our output, we must spend more on wages.

Mr. Williams.—Except in the matter of steel furnaces where we might be obliged to operate two furnaces instead of one.

Mr. Noyce.—Have you allowed for any further saving in the moulding composition? A little earlier you said you expected considerable saving.

Mr. Williams.—Up to the present we have not been able to bring about that reduction. I have not mentioned it because it is not absolutely certain that we shall be able to do it.

Dr. Matthai.—With regard to manufacturer's profit you suggest a rate of 10 per cent.

Mr. Williams.—Yes.

Dr. Matthai.—Your idea is that if you want the investors to be tempted to put their money into an industry like yours, you ought to offer them 10 per cent.

Mr. Smith.—Not that. My idea is that the Board in the past have considered 10 per cent. as being a fair return on ordinary capital and I consider that in the case of a pioneer industry like this, it would not be possible to raise money in any other way at first except by offering ordinary shareholders 10 per cent.

Dr. Matthai.—What is your opinion on this? Supposing, for example, an industry definitely receives protection from the State for a specified period, that fact implies greater security of return as far as that industry is concerned. Won't you make any allowance for that?

Mr. Smith.—Even then I don't think I should. Granting that we are given protection, we shall then have to enter into large contracts for the purchase of other block and any further capital which we might be able to raise cheaply would have to be used for that.

Dr. Matthai.—That doesn't affect the general question.

Mr. Smith.—There still remains the fact that there will have to be behind any preference shares a large block of ordinary shares.

Continued on the 19th May 1926.

Possibility of savings.

President.—I was talking about the percentage of yield from ore to liquid steel yesterday.

Mr. Williams.—Are you dealing with any particular year?

President.—I am dealing just now with the present year.

Mr. Williams.—There is a reason for that.

President.—In earlier years it was the same thing.

Mr. Williams.—In 1924-25 the wastage was very much greater than in 1925-26 and the reason for that was that we bought up a very large quantity of light scrap which was left out in the open and which very, very badly rusted, and when that came to be melted, the loss was greater.

President.—It is not really a chemical change.

Mr. Williams.—It is.

President.—It is not like containing more phosphorus.

Mr. Williams.—No. But it contains more oxide.

President.—Can you compare the two?

Mr. Williams.—I think we can. That is the principal reason for excessive waste.

President.—Whether this year or last year, you have taken 10 per cent. as wastage in both years.

Mr. Williams.—Yes.

President.—That is the point. It comes to more than 11 per cent. which I regard as somewhat excessive.

Mr. Smith, have you got the information about the outturn and the realised prices?

Mr. Smith.—I am afraid, not.

President.—It is very inconvenient, because you see Mr. Williams is going away. One expert is not here. He may have to ask Mr. Williams' substitute to appear before us and give any further information that he may want. We want to try and avoid that as far as possible. As regards the basis of your claim, I am afraid I will have to go on with such materials as we have now. You may send in your statement later and if we think it necessary, we may have to recall you. There is no help for it. Yesterday we tried to ascertain what ought to be your fair selling price. Now we have to find out the import prices to start with of the competing articles. These prices may have to be modified by the realised prices.

Mr. Smith.—I recognise that it is very important.

President.—I shall do what I can with such materials as you have given, but I am warning you that that information is absolutely necessary.

Mr. Smith.—We have got figures here for 1924-25.

President.—I am coming to that. I shall deal with such materials as you have given us. In your cost sheets for 1924-25 the outturn is shown as 13,740 cwts. and your deliveries in that year amounted to 13,838 cwts.

Mr. Smith.—Yes.

President.—More or less the figures are comparable. But if you look at page 5 of your printed representation, you will see that you have given there your deliveries for four years. Are these for calendar years or financial years?

Mr. Smith.—These are for calendar years.

President.—I think it is better for you to give us figures for the financial year, because your costs are based on that.

Mr. Smith.—My telegram, if it is answered properly, will answer that.

President.—You have given us the net sales as 13,798 cwts. for 1924-25, but you have not given us the stocks.

Mr. Smith.—No.

President.—Are you getting us figures as to stocks?

Mr. Smith.—I have telegraphed to Calcutta for stocks. But I have only asked for 1924.

President.—How will you check the figures then?

Mr. Smith.—It is all weighed at the beginning of each year.

President.—Then you start from 1924.

Mr. Smith.—Yes, to the beginning stock they will add the outturn for the period. On the other side they will show their sales, shortage of stock and stock carried forward. I have telegraphed also for the realised prices once more from March 1925 to March 1926, so that if they answer that correctly, it will be all right. The figures which they have telegraphed to me so far are quite hopeless and they don't tally with anything.

President.—It is a pity that you haven't got the correct figures. On page 6 we have got your realised price for 1924-25 which is Rs. 34 a cwt. That is an all round price.

Mr. Smith.—Yes.

President.—For half the material in that year you got a price approaching Rs. 38 a cwt., see page 2. What I mean is for a total of 7,000 odd cwts. the prices are in the neighbourhood of Rs. 38. That is an average price.

Mr. Smith.—Yes.

President.—So that for one half you get an average price of Rs. 38 and for the other half you are getting a price of Rs. 32 a cwt.

Mr. Smith.—I should prefer to make them Rs. 40 and Rs. 30.

President.—What do you mean? There is no Rs. 40 here. Up to item 6, it is all Rs. 38. As regards item 7, it is Rs. 67 for a part of it. As regards item 8, it is axle boxes which work out at Rs. 38-8-0 per cwt.

Mr. Smith.—Then let us take the figure of Rs. 38-0-0.

President.—Applying yesterday's principle, we will assume at this moment that the prices are more or less the same this year as last year.

Mr. Smith.—Yes.

President.—You take the works cost of last year as Rs. 23-10-10 and you get Rs. 1,13,000 for overhead charges.

Mr. Smith.—I make it Rs. 1,08,000.

President.—I make it Rs. 1,13,000. It will be corrected, if it is wrong. It is merely a matter of calculation. On last year's production it works out at about Rs. 8 per cwt.

Mr. Smith.—Yes.

President.—The manufacturer's profit is about Rs. 4-9-0, that is on an output of about 14,000 cwts.

Mr. Smith.—Yes.

President.—If you take 5 years' results, it will come down as follows:—Rs. 36, Rs. 34, Rs. 32, Rs. 30 and Rs. 28. What is the average of these?

Mr. Smith.—Rs. 31.

President.—You are now getting Rs. 35.

Mr. Smith.—That is on picked castings.

President.—Not on picked castings but on the outturn of the whole year.

Mr. Smith.—What I mean by picked castings is that we have only accepted orders which we could do more or less at a profit.

President.—On this year's figures, it is Rs. 36 and you have realised Rs. 35-1-0. In a year you may not make as much as 10 per cent. profit; you may make a little less. The point in that case is that your application for a bounty of Rs. 10 a cwt. is not substantiated by results, that is what I am trying to point out.

Mr. Smith.—I agree with you up to a point.

President.—It is no use saying up to a point. Here are the figures which are subject to corrections, if necessary.

Mr. Smith.—What I want to tell you is that we have so far accepted work which we could do and not make a large loss on it. What we wish to do and why we have asked for a bounty at all is to take in all the work which is offered to us and that means reducing our selling price on the balance of work necessary to bring us to an economic basis..

President.—Apparently what it comes to is this. Your prices have been kept up.

Mr. Smith.—Our prices have been kept up. We have not accepted prices which are uneconomic.

President.—Why do you say that? Practically you are getting a 10 per cent. return.

Mr. Smith.—On the work which we have accepted.

President.—Not on the work accepted, but on the whole investment.

Mr. Smith.—On the investment at present.

President.—You must make out a case from which you can show that, without getting protection, the industry cannot be carried on, or that it won't be developed as it ought to be. or some such result.

Mr. Smith.—We have a reason, and, I consider, a good reason to show. We cannot expect to get necessarily these prices on a future date.

President.—That is another point. We are not making any forecast as to prices.

Mr. Smith.—We don't ask you to make a forecast.

President.—I mean, forecast as to import prices.

Mr. Smith.—It is scarcely a forecast when we can show that offers are being made at prices which are well under Rs. 36.

President.—That may be so, but that does not necessarily prove that you cannot realise a better price. As a matter of fact what you have proved is that you can realise a better price than the foreign article. One of the reasons is that you are on the spot, castings are required and the purchaser has the satisfaction of seeing them made and getting them inspected from time to time and at the same time getting deliveries much quicker. For that reason it is natural that you should get a little better price.

Mr. Smith.—Only on small orders.

President.—What I mean is that as to one half you have got Rs. 38 at least. And as to the other half, you have got Rs. 32 which is well above the import prices given by you.

Mr. Williams.—There is another point and that is this. If we are going to develop this industry as rapidly as we want to do, we must accept large orders for railway requirements which are imported into this country at a much lower rate.

President.—But you have not given us a much lower rate. The lowest rate that you have given us works out to Rs. 32 a cwt. with the duty.

Mr. Williams.—In addition to that we also want to be in a position to compete with continental castings.

President.—I am coming to that. So far as British prices are concerned, more or less you can compete even at to-day's prices and on to-day's output. If you halved your profit, it would give a reduction of Re. 1 or Rs. 2 which would put you down below British prices, if you took for instance Rs. 31 as the average.

Mr. Smith.—It would give us Rs. 33-10-0.

President.—That is to say if you took your works cost as they are now.

Mr. Smith.—Yes.

President.—If you took the five years' average, as I was suggesting to you even if your output does not increase, you can afford to sell your castings at Rs. 28-8-0 on half the profit.

Mr. Smith.—We are reducing by Rs. 2 per annum to get to this average. We cannot work down to that unless we increase our output.

President.—I am not taking that into account. What I am suggesting to you is, simply by halving the profit for the first three years, you can sell your castings at an average price of Rs. 28-8-0. On your engineering castings you are bound to get a little better price. The 5 years average price you took as Rs. 31.

Mr. Smith.—I don't see how we could do that unless we increase our turnover.

President.—Increase it!

Mr. Smith.—How can we?

President.—I will show you how you can increase it. Just take Rs. 31 and halve your profit, that is to say deduct Rs. 2-6-0 from it. It leaves you Rs. 28-10-0. If you are able to sell at Rs. 28-10-0, an average price of axle boxes and other things, you may get a price of Rs. 25 or Rs. 26, whilst on other castings you may get a price of Rs. 3 or so more. You can thus under-sell Great Britain on these figures. You can afford to sell at a price of Rs. 25 or Rs. 26 and they have not got below that.

Mr. Smith.—In that case we have to stand the loss for three years.

President.—No, you may only get half the profit. If you can sell your castings at Rs. 25 or Rs. 26, you can increase your output assuming that you get British prices in the country.

Mr. Smith.—Yes, but we cannot increase our output so suddenly as all that. In the first year if we sell at Rs. 28 a cwt. our cost is Rs. 36.

President.—I am taking a 5 years' average. The year of Rs. 36 has gone. This year begins with Rs. 34.

Mr. Smith.—If this year begins with Rs. 34, we are going to sell it at Rs. 28 on the 5 years' average.

President.—I have taken the average as Rs. 31.

Mr. Smith.—We are premising that we are going to increase our selling sufficiently to do that.

President.—The only reason why you are not able to sell is that your prices are found to be high.

Mr. Williams.—That is the principal reason.

President.—What I am suggesting to you is, if you bring your selling price down below Rs. 28—I am just now talking of British castings—I don't see any reason at all for your not being able to sell your castings.

Mr. Smith.—We have to find our market first.

President.—The market is there. You have given us figures. These people won't buy your castings, because they are more expensive.

Mr. Smith.—Another great reason, I personally think, is that the ordinary steel casting is needed to do very important business, and people are very chary of giving us orders at first except for very small quantities.

President.—That doesn't apply to wagon builders. They know what stuff they can get. I can understand an outsider running a small mill being very chary, but I do not think these engineering firms have any such prejudice.

Mr. Smith.—Oh! We have found it.

President.—They are used to your castings.

Mr. Smith.—Certain people are. We have to increase that market.

President.—As far as the quality of the casting is concerned, you have had no complaint so far from Messrs. Burn and Company. Have they complained?

Mr. Smith.—I don't think anybody has.

President.—What is the good of saying then that there is a prejudice? I am talking of your principal customers. You say that the railways are

buying them from you. They are your customers and they are not prejudiced.

Mr. Smith.—What I am saying is that in the past it has operated.

President.—The past has gone now and we are talking of the present and the future.

Mr. Smith.—So am I. In order to increase our output, we shall not only have to increase the amount of business which we get from our present constituents, but also we have to find new ones. The same factor will operate in the case of new constituents as has actually operated in the past.

President.—At present if you get all your orders from your present constituents, your outturn will have to be doubled.

Mr. Smith.—I very much doubt it. The Great Indian Peninsula Railway are a very important customer of ours. They are giving us already as much as they can.

President.—I am talking of wagon castings.

Mr. Smith.—Even in the case of wagon castings in the year 1924-25, we had a considerable portion of Burn's business.

President.—Does not that prove my point that, so far as confidence in your manufacture is concerned, you suffer from no disadvantage?

Mr. Smith.—Not in the case of those who have already tried us.

President.—They are the only people who will buy your castings if the price is reduced.

Mr. Smith.—I don't think that they have the market to buy double.

President.—According to your own figures, you have sold 7,000 cwts. of castings to railways in one year which doesn't include anything for wagon builders.

Mr. Smith.—It does to a certain extent. Burn's took underframe castings from us. The list given in the printed representation is only a list of typical castings we made.

President.—I am talking only of half your production that you have sold to railways and doesn't include anything sold to wagon builders.

Mr. Smith.—No. What I am trying to say is that in order to increase our output, we have not so much to approach those who are already dealing with us, people like Burn, Jessop, etc. But we have to seek fresh outlets for our stock which we manufacture and we cannot do all that in a moment. We shall not get these people to send us trial orders immediately by reducing the price to Rs. 28 or any other figure.

President.—If these wagon builders buy all the castings from you—only taking the amount of castings in a wagon at 7 cwts. and converting bogie underframes into wagons, in the proportion of two wagons to one underframe—it will give you 28,000 cwts. seeing that they build about 4,000 wagons a year. This is in addition to the 7,000 cwts. of castings you are selling to these railways. That is a good deal more than your present output. My point is that the first condition of your being able to sell is the reduction of your price and I am trying to show that you can reduce the price without suffering any loss.

Mr. Smith.—Eventually, I agree with you.

President.—Why do you say 'eventually'?

Mr. Smith.—There is certainly another factor which you have not yet considered. In order to double our output, we have to put down a lot more plant.

Mr. Noyce.—Have you to lay down a lot more plant to double your output? Your present capacity is about 600 tons a month and you are doing only about 60 to 75 tons.

Mr. Smith.—That is only for liquid steel. We have got furnaces capable of producing 6,000 tons per year, but we have not got machine shops or casting shops to deal with that quantity.

Mr. Noyce.—I am glad you had corrected my impression which was that when you talked of capacity, you were talking of the capacity of the whole plant. I didn't understand that you were simply referring to a part of it.

Mr. Smith.—I thought I was understood correctly.

President.—That factor doesn't affect this question. For each cwt. we have allowed you so much. If you want to increase your plant, the figure is there.

Mr. Smith.—All that I am getting at is that it is unfair to my mind to take the average price and apply it against the first year inasmuch as we cannot possibly hope to do work down to the figure.

President.—I am not applying it against the first year. I have taken the 5 years' average. I give you now Rs. 31. In the 5th year on these figures, you come down to Rs. 26.

Mr. Smith.—Quite so. That is why we have asked for a limited bounty. What I am asking is what would happen in the meantime.

President.—What would happen in the meantime! You don't make in the first year any profit, if you sell at Rs. 31. In the second year, you make some; in the third year, you make full profit and in the fourth year you make a good deal more.

Mr. Smith.—There is another factor which I should like to mention. You take it that from the 1st of April 1926 we will be able to sell at Rs. 2 less than the cost of the previous year. That is not so.

President.—It may be 5 years from the date of our report. I am just trying to take any figures to calculate the results of the next five years or an average. Don't put it down as the 31st April 1926. It may be 1st April 1927.

Mr. Smith.—What I am getting at is that although we may make a very good profit at the end of 5 years, in the meantime we have to find the difference between Rs. 36 and Rs. 31, that means we are going to lose Rs. 5 in the first year.

President.—You are not making a profit of 10 per cent. You are not losing at the same time. It would be a small return for the first three years and in the next two years it will be a good deal more. I have not divided this by any higher figure than your present output. If you have to increase your plant, you will get so much more in proportion by way of overhead and so much more by way of profit. It does not enter into this question.

Mr. Smith.—The way we look at it is this. Our present cost is Rs. 36 excluding Rs. 4-12-0 for manufacturer's profit, that is to say the net cost is Rs. 31-4-0. As far as I can see, your argument is that we should, in the meantime, in order to double our output, sell at Rs. 28, making a loss of Rs. 3-4-0 per cwt. on 20,000 cwts.

President.—Not at all. On the one half of your output you are realising Rs. 38 and on the other Rs. 32. I am not touching one half in this. It only applies to that part of your output for which you are now realising Rs. 32. In that case what happens?

Mr. Smith.—We lose 12 annas on it.

President.—That is not so.

Mr. Smith.—We also make nothing on the other.

President.—You do. On Rs. 38, you make more than 10 per cent.

Mr. Smith.—I think there is a fallacy somewhere.

President.—If you add Rs. 38 and Rs. 28, it comes to Rs. 66, the average being Rs. 33 which would give you half your profit in the first year, ¾ths in the second year, full profit in the third year, 1¼th in the fourth year and 1½ in the last year. Of course, we have not decided anything. Please understand that. I am suggesting to you that by selling one half of your output in the neighbourhood of the British price, you can increase your output and you don't lose, but you do make a profit.

Mr. Smith.—There is another factor.

President.—Just listen and consider this.

Mr. Smith.—I am prepared to consider anything which you can put before me.

President.—I am putting this before you. I don't want to commit myself or you at this stage. It just strikes me that it is one of the possible ways of doing it.

Mr. Williams.—I think that the suggestion will have to be put before the proprietors.

President.—We cannot say anything to that. You can tell your proprietors. For our purpose, the proprietors are supposed to be here represented by you and Mr. Williams.

Mr. Smith.—There is another factor to be considered here and that is. interest on working capital, if we are going to double our output in this way.

President.—In this I have not taken any increased output. If we divided these figures by 20,000 which I suggested yesterday, your selling price would be still lower.

Mr. Smith.—Yes.

President.—I am just taking your present output and if your output is increased, it is better for you, because for every additional cwt. that you sell you will be able to recover something more.

Mr. Smith.—Yes.

President.—As regards continental competition, these low figures were quoted to you by Burn and Company, but they did not mention the country of origin. Have you any reason to suppose that those are continental castings?

Mr. Smith.—I have the authority of a letter from Messrs. Burn and Company stating that they were getting these from continental sources, but they did not state the country.

President.—What prices did they quote?

Mr. Williams.—Rs. 14.

Mr. Noyce.—That was landed in their works?

Mr. Smith.—Yes.

Mr. Noyce.—With duty and everything?

Mr. Williams.—Yes. They merely state that it was the inclusive price for casting.

President.—That is other than axle box.

Mr. Williams.—Quite so. That is casting for bogie underframes.

President.—Was that due to the collapse of the Belgian exchange?

Mr. Williams.—That might have contributed to that.

Dr. Matthai.—How long ago was this?

Mr. Williams.—The quotation referred to December 1925.

President.—There has not been such a drop in the price of steel.

Mr. Williams.—It does not compare with the drop in the price of steel.

Mr. Noyce.—Have you any idea whether they actually bought them at that price?

Mr. Williams.—The castings are here in Calcutta. I have seen them.

Mr. Noyce.—They say " we have since had a quotation."

Mr. Williams.—They actually placed an order at that price.

Mr. Noyce.—It is surprising. We shall have to examine them on this point. It may be a job lot.

Mr. Williams.—It is not a job lot.

President.—Taking continental angles, there has been only a drop of 14 shillings from £6-15-0 to £6-1-0 between December 1925 and April 1926. I cannot understand that. There has been no variation in the Indian exchange.

Mr. Williams.—I have got some more figures from a telegram containing much later prices.

President.—Are they from your agent?

Mr. Williams.—Yes. The prices vary from 13*s.* 6*d.* to 17*s.* 7*d.* according to the design of the casting f.o.b. Antwerp.

President.—What is the date of the telegram?

Mr. Williams.—29th April 1926.

Mr. Smith.—The average comes to Rs. 13-9-0.

President.—It comes roughly to Rs. 14. I cannot understand I am sure. At present we must leave it at that. The quotation given by Messrs. Jessop and Company appears to be correct.

Mr. Smith.—Yes.

President.—Did you include the duty?

Mr. Smith.—Yes.

President.—What did we ascertain the British price of castings at?

Mr. Smith.—About Rs. 24-1-5 a cwt.

President.—As regards axle boxes, the British price is Rs. 24 a cwt. against the continental price of Rs. 13-10-0.

Mr. Smith.—Yes.

President.—I take it that your proposal is that you claim the difference between what ought to be your selling price and these figures.

Mr. Smith.—Yes.

President.—Besides a bounty or a duty, have you any alternative proposal to make?

Mr. Smith.—What do you mean?

President.—As to how to enable you to secure a reasonable selling price?

Mr. Williams.—I think that we had better give the question a good bit of thought. I don't think it is possible to put a duty on these castings because they come in as component parts of so many things.

Dr. Matthai.—Do you mean that it would be difficult from the Customs point of view to determine what is a steel casting and what is not?

Mr. Williams.—Yes, it would be difficult.

President.—In the case of wagons, for instance, it is rather different from that. There they get Indian tenders and compare them with the lowest acceptable foreign tender and then give the bounty. They are supposed to receive the difference subject to adjustments. In your case, there is no other competing firm just now.

Mr. Williams.—No.

President.—Therefore the lowest Indian tender will be your own.

Mr. Williams.—Yes.

President.—For that reason, would it be possible to work on a flat rate by some arrangement with wagon builders or railways for one, two or three years?

Mr. Williams.—I think it is quite possible. We are already doing that not only with the railways but with one or two private concerns. For instance, the Indian Iron and Steel Company entered into a contract with us for one year.

President.—Supposing we are to make that proposal—I don't expect you to give me an answer on the spot—taking into consideration all those factors which I mentioned a little while ago, would you be prepared to mention a flat rate for each year?

Mr. Smith.—Do you mean to say if a bounty were granted?

President.—Then, there can be no question of bounty. Supposing you say you want Rs. 25 a cwt. and arrangements are made for you to sell your castings at Rs. 25 a cwt.

Mr. Smith.—This would assume I presume that the whole of the business went to us.

President.—Not the whole of the business but the whole of what you could produce.

Mr. Smith.—Then, let me say that we have an option on the whole thing.

President.—It is not a question of option.

Mr. Smith.—It is a question of as much as we can produce.

President.—Subject to conditions of delivery and a thousand and one other things.

Mr. Smith.—I think we could do that. If we were given an assurance that we could get immediate work, we should be prepared to enter into a five years' contract at a given price.

President.—Would it be possible also to revise the terms every 2 or 3 years?

Mr. Williams.—Certainly.

President.—I would like you to think over the proposal and send us your considered opinion, keeping in view the principles on which we discussed the whole question just now.

Mr. Smith.—We will discuss it with our proprietors, and send you our opinion.

President.—Then there is this question. You may be able to turn out only 1,000 cwts. of castings and they may require 4,000 cwts. In that case, it would be very unfortunate.

Mr. Smith.—That is why I said there was an option on it.

President.—As regards deliveries, from the time the order is placed, how long will you take to execute an order say for 5,000 axle boxes?

Mr. Williams.—The railways usually state the period.

President.—At what rate can you turn them out?

Mr. Williams.—Our maximum output is 2,000 boxes with our present plant. We can deliver 2,000 axle boxes a month and by expanding our moulding plant we could do very much more.

President.—That is to say, if you could do only axle boxes.

Mr. Williams.—No. It would leave us free to accept other work which does not require moulding.

President.—Supposing you produce 1,000 cwts. a month—at present that is your average—and if you get an order for 1,000 cwts. of railway castings, how long would it take you to deliver that 1,000 cwts. from the date of the order to the date of delivery?

Mr. Williams.—It would depend on whether the railways supplied us with patterns of their own. If we had to make patterns ourselves, we should require three weeks to make the pattern only, if it was an axle box.

President.—We will take the question of repeat orders separately.

Mr. Williams.—If they sent us their pattern, the first delivery will begin in about three weeks time and 1,000 cwts. will be completed in seven weeks. that is, a month to complete their work.

President.—If you don't get the pattern?

Mr. Williams.—We will require three weeks to make it.

President.—Supposing you have to supply all these castings that are required for 4,000 wagons in addition to other kinds of castings which you are making, you will have to increase your plant. That would only apply to the moulding department and the machine department.

Mr. Williams.—To increase the plant sufficiently for that.

President.—How long will you take?

Mr. Williams.—Probably 3 months if we had to import the machines.

President.—Do you mean to say you can get it going within three months?

Mr. Williams.—It is a very simple matter to erect it.

President.—That would present no difficulty?

Mr. Williams.—None whatever.

President.—There is one other point. Apart from other things, you claim protection on the ground that this casting has some national aspect, that is to say, in the making of munitions. Have you actually executed any orders for the Ordnance Department?

Mr. Williams.—We have executed orders for almost all the ordnance factories in India.

President.—How many are there?

Mr. Williams.—Government Gun Factory, Cossipore, Metal and Steel Factory, Ishapore, Harness and Saddlery Factory, Cawnpore, Gun Carriage Factory, Jubbulpore, Cordite Factory, Aruvankadu, Rifle Factory, Ishapore.

President.—But they were all small orders.

Mr. Williams.—Yes. They would only be small at the present time, as part of the ordnance factory has closed down.

President.—Your contention is that your works could be turned into an ordnance factory for the time being for the production of special steel.

Mr. Williams.—Yes, and such other castings as are required for gun carriage-work and other implements of war.

Mr. Noyce.—I am not very clear yet about your total capacity. Your total capacity is how many tons of liquid steel.

Mr. Williams.—6,000 tons.

Mr. Noyce.—How many tons of castings?

Mr. Williams.—4,500 tons of castings.

Mr. Noyce.—You have not got the capacity for 4,500 tons of castings at present?

Mr. Williams.—No. There are additions to be made. But I think that Mr. Smith has perhaps overstated the case when he says that we should require a good deal more plant. What we should require is two extra cranes, some moulding machinery and one or two drying stoves. So the amount of extra plant required would not be much.

Mr. Noyce.—What is your present capacity as regards castings? What is it exactly?

Mr. Williams.—We could do up to 2,000 tons with our present plant.

Mr. Noyce.—You have stated your capacity as 4,500 tons when it is not. What I understood by your total capacity was what you could actually turn out as the finished article. That seems to me to be the correct method of speaking.

Mr. Williams.—The extra machinery required could be installed in three months.

Mr. Noyce.—But you have not got it. Your real capacity is 2,000 tons of castings per annum.

Mr. Williams.—With very small additions to the plant, we can turn out 4,500 tons.

Mr. Noyce.—What do you estimate as the total cost of the plant required to enable you to deal with the whole amount of liquid steel?

Mr. Williams.—The two cranes will cost £1,200. The extra moulding machinery will probably cost £500 and the drying stoves will probably be another £500.

Dr. Matthai.—Under Rs. 30,000 in all.

Mr. Williams.—Yes.

President.—Is that an electric plant?

Mr. Williams.—The moulding machinery is an electric plant.

Mr. Noyce.—Have you in the course of your tour round India interviewed the railways with a view to securing orders?

Mr. Williams.—Practically all the first class railways.

Mr. Noyce.—With what result?

Mr. Williams.—With this result that they are all quite willing to give us an opportunity to manufacture for them, but they insist that they would place only small trial orders in the first instance.

Mr. Noyce.—Is not that reasonable?

Mr. Williams.—Yes, and when they are satisfied with our work they are quite ready to place larger orders with us.

Mr. Noyce.—Are they doing that?

Mr. Williams.—Those railways for whom we have done work to their satisfaction are doing that.

Mr. Noyce.—Which railways?

Mr. Williams.—The East Indian, the Bengal Nagpur, the Eastern Bengal, the North Western and the Great Indian Peninsula Railways. We have just begun to receive orders from the Madras and Southern Mahratta Railway as a result of the tour I took to Madras.

President.—That covers practically all the big railways.

Mr. Williams.—Yes.

Mr. Noyce.—If you were now working to your full capacity, would you still ask for protection?

Mr. Williams.—What figure have you in mind—2,000 or 4,500 tons?

Mr. Noyce.—Either or both.

Mr. Williams.—If we were doing 4,500 tons, we shouldn't.

Mr. Noyce.—With 2,000, you would?

Mr. Williams.—Yes.

Mr. Noyce.—It can hardly be said that so far you have felt the full effect of continental competition?

Mr. Williams.—We have to be prepared to meet it. The first time in which we came up against this was in connection with the enquiry of Messrs. Burn and Company.

Mr. Noyce.—The last sentence of the Board's previous report on steel castings is that "one class of steel castings will benefit from a proposal which we have made in our Second Report for colliery tub wheels will become subject to the import duty of 25 per cent. which has been proposed for the tubs." Do you make any coal tub wheels?

Mr. Williams.—We do. There again continental competition comes in.

Mr. Noyce.—You have had no benefit from the import duty of 25 per cent.

Mr. Williams.—Absolutely none.

Mr. Noyce.—What price do you charge for your colliery tub wheel?

Mr. Williams.—We charge Rs. 30 a cwt.

Mr. Noyce.—What does the continental wheel come at?

Mr. Williams.—Rs. 14 a cwt.

Mr. Noyce.—That is with the duty.

Mr. Smith.—Yes.

Necessity of Protection.

Mr. Noyce.—Do you consider that a bounty of Rs. 10 a ton would be sufficient to enable you to meet continental competition?

Mr. Williams.—It would make our position so much better with regard to the higher priced castings. In that case we could afford to take on work at continental rates and would be quite ready to do that in order to secure our market.

Dr. Matthai.—We have to look at the question on this basis. If we give you protection, it ought to be possible for this industry to develop and for other people to come into this business and start new industrial units. We are not particularly interested in keeping you alive. We want the industry to develop. I should like to look at the question from that point of view. We have no data about your prices and it is difficult to say anything till we get them. Supposing I take Rs. 24 as the British price and roughly Rs. 14 as the continental price—I assume that the continental manufacturer is going to supply somewhere about half the Indian market—the price you are likely to get will be about Rs. 20 which is an intermediate figure. Taking your costs after making the necessary adjustments for working capital, etc., at Rs. 30, protection for you will mean somewhere about 75 per cent. on the c.i.f. price. When you suggest a bounty of Rs. 10 a cwt. you are omitting various things. You have to include overhead charges and manufacturer's profit. If we give you a price that would develop the industry, we will have to give you protection to the extent of 75 per cent. Of course that is purely a hypothetical figure. *Prima facie*, I would say that an industry which requires protection to the extent of 75 per cent. unless the other circumstances are sufficiently strong, labours under such serious disadvantages that it would never be able to dispense with protection.

Mr. Smith.—I quite agree with you there except that the question of continental competition, although it is, at present, great—I don't think we have any data upon which we can go—may not continue for long as it is. But the slight reason that there is something to be said for that point of view is that presumably British firms can produce their output at very much the same rate as the continental firms except on a question of longer hours which they are supposed to work on the continent and of any saving which they can make as a result of the fall in exchange.

Dr. Matthai.—Let me put it this way. If the average price you are going to get, on the basis of import prices, is going to be roughly Rs. 20, and your works cost is somewhere about Rs. 35, then you will accept my position that probably you are not going to dispense with protection at all.

Mr. Smith.—I accept your position except that you do not, I think, pay quite sufficient attention to the fact that we shall be able to very much reduce our works cost by increasing our turnover.

Dr. Matthai.—I will come to that. Mr. Noyce was asking you about your total capacity. At present your melting furnaces can account for 4,500 tons of finished product. From your statements I gather that as far as your works cost is concerned, the crux of the problem is the extent to which you are able to utilise your melting furnaces. If you can utilise them better, you are going to save in cost. If you are not able to do that, you are not going to save. As I pointed out to you yesterday, supposing you are able to capture the whole market in this country, even then you would find that more than half of your potential capacity of your melting furnaces would lie unutilised.

Mr. Smith.—That is the reason why we want to introduce the manufacture of spring steel.

Dr. Matthai.—Supposing we come to the conclusion that spring steel doesn't deserve protection, we have got to consider this question on its own merits. If the position is that more than half of your capacity is going to lie unutilised, even if you capture the whole market in the country, which, as you say, is only 2,000 tons, then it doesn't seem to me that you will ever be able to bring your costs down to an economical basis of production.

Mr. Smith.—We say that the market is at least for 2,000 tons.

Dr. Matthai.—Supposing you have got this 2,000 tons, then you have captured everything that you are in a position to capture in the country.

If 75 per cent. of protection is what you require and then on top of that—even if you did get that protection—you find you are unable to utilise more than half the capacity of your melting furnaces, it seems to me that the case for suggesting that you will never come to an economical basis is pretty strong.

President.—So far as the capacity of your melting furnaces is concerned, it is no doubt double your requirements at the present moment, but as regards the rest of the plant, you still require for your 2,000 tons additional machinery in the moulding department, machine shop and so on. So your unused capacity as regards 4,500 tons is as regards liquid steel and not as regards castings.

Mr. Williams.—There is also this fact. I have stated that the most economical way to operate a steel foundry or steel furnace of any kind is to work it continuously. If we can work only one furnace continuously, we are producing steel from that furnace at the cheapest rate possible and the difference would only come in, in the depreciation of the furnace which stands idle and the interest on the cost of that.

President.—Could you run the works at all with only one furnace? You must have two furnaces in order to carry on at all.

Mr. Williams.—It is not necessary.

President.—There may be a break down. Can you do with one furnace?

Mr. Williams.—We can do with one furnace which means we can produce all our liquid steel with our present plant provided we work it night and day.

Mr. Noyce.—Why did you put in the second furnace?

Mr. Williams.—As there was the possibility of a break down, we put in the second furnace, so that we might switch on to the second one, if necessary. The result of the last five years experience is that we have never been obliged to utilise the second furnace.

President.—If the furnace gets older, will it be possible to run the works with one furnace?

Mr. Williams.—Even then it doesn't matter.

Dr. Matthai.—When you instal the second melting furnace, you very considerably over-estimated the requirements.

Mr. Williams.—I don't think so. The second furnace was originally put in as a spare, but soon we found it unnecessary. It is only an over-estimate of our requirements of the plant.

Mr. Smith.—The electric furnaces stand in our books at Rs. 3,20,000. We are now taking 60 per cent. of that as the replacement value which comes to Rs. 1,92,000, so that at the most we are wasting Rs. 96,000 worth of capital.

Dr. Matthai.—Supposing we give you protection to the steel castings industry and you are able to increase your market in India in consequence, do you think there will be any likelihood of any other industry being started? You have the equipment here and with slight extensions you will be able to meet the whole requirements of the country, that is to say you will have a monopoly. Are we to give you protection in order to enable you to get a monopoly in the country?

Mr. Smith.—We are not asking protection in a permanent form. We want protection only for five years.

Dr. Matthai.—Once you have captured the whole market in the country whether you have protection or not, nobody else would be able to look in. You are in the field. You have established connections. My point is whether the market in the country is sufficiently big for a reasonable competitive system.

Mr. Williams.—I should say that it is sufficiently big.

Dr. Matthai.—I will tell you an alternative possibility, that is that these wagon builders may develop their own. You would then have precious little market left.

Mr. Williams.—We would only lose wagon builders. But there will always be work to do for the railways.

Dr. Matthai.—I am not clear whether the country is going to derive any advantage from protection being given to you in the shape of a reasonably well developed, diversified industry in the country.

Mr. Williams.—If you assume that an industry like the wagon building industry is essential to the country, I think it is only fair to assume that the works which can supply all the component parts of a wagon are also essential.

Dr. Matthai.—You are putting your claim forward on the ground of national importance. You don't want me to consider the usual economic grounds.

Mr. Williams.—No.

Dr. Matthai.—You say that this industry is of national importance. Even though it is going to mean a great deal of economic loss to the country as a whole, on the ground of national importance, we should give you protection. In that case, supposing you were the only firm engaged in that industry, does not that mean that for a thing which is of very great national importance, the country has to depend upon a monopolistic firm.

Mr. Williams.—It is monopolistic in so far as it captures the whole work that is available in the country, but it still has to consider the competition from Great Britain and other foreign countries.

Dr. Matthai.—To the extent to which you have been given tariff protection, there is nothing to prevent you from putting up the price.

Mr. Williams.—We have only asked for it as a temporary measure.

Dr. Matthai.—For this temporary period of five years, it is going to mean some cost to the taxpayer and the taxpayer has been asked to bear that burden simply because the industry is of national importance. In that case the State might make it in connection with one of these various ordnance factories. Personally I am not in favour of State monopoly in the least, but where protection for an industry is going to be supported on the ground of national importance and where the industry is not going to have the benefit of internal competition, from the point of view of the public, there is, it seems to me, a case for handing it over to State agency instead of having it run by a private agency.

Mr. Williams.—That is a matter of opinion—as to whether a State agency could work as cheaply as a private agency.

Dr. Matthai.—The real advantage of a private agency is that it rests upon a competitive basis.

Mr. Williams.—The competition, we should be up against, is far more serious from outside than from internal sources.

Dr. Matthai.—Let us talk of the period during which protection is going to operate.

Mr. Smith.—I accept your idea as regards the temporary period in which the industry will be carried on.

Dr. Matthai.—One seldom hears of a protected industry being able to dispense with protection for any period less than a generation.

Mr. Williams.—We are bargaining for something which will only last for five years.

Mr. Smith.—I don't think you can apply the usual rule in our case. We have come forward with a specific request for protection for a limited period.

Dr. Matthai.—Every industry that asks for protection asks for a modest period, that is quite true. It may be that you will be able to emerge triumphantly at the end of five years. The other thing is also possible.

Mr. Smith.—I don't think so, because we have asked for protection on a descending scale. Either the barrier which is erected is sufficient or we must be losing money, and the business which is losing money automatically closes down.

President.—I understood you to say, when Dr. Matthai was examining you, that in coming to the conclusion whether you could dispense with protection altogether, the conditions on the continent were so uncertain that we could not say with certainty what might happen as regards the competition from the continent; but as regards British competition, even on the present figures, you were within a measurable distance.

Mr. Smith.—We are, I agree, but we need protection in the meantime.

President.—What it comes to is this that so far as the British castings are concerned, even taking the present cost, the need for protection is much smaller than 75 per cent. As regards the continent, it may be 75 per cent., but the conditions of exchange and other things being uncertain, it is difficult to say whether it would last for ever or not.

Mr. Smith.—Quite.

President.—As regards spring steel, I may tell you that it is a very unusual application. As far as I remember, we have not dealt with any such case. Where protection has been asked for even before the commencement of manufacture, it is difficult to judge the measure of protection, because we have no actual costs to start with.

Mr. Williams.—In the case of Tata's in connection with corrugated sheet, was not protection given to them on the guarantee that they would put down a rolling mill?

President.—They had a rolling mill about to work. They were manufacturing plates at that time and from plates to sheets, it was not a long way.

Mr. Williams.—At the same time the actual manufacture of corrugated sheets had not commenced. They were merely approaching that stage in the same way as we do now.

President.—Protection was given more or less on the same basis as plates. I mean to say it was calculated on that basis. I am trying to point out that though the process is different, it is not so different as to prevent us from coming to any conclusions.

Mr. Williams.—At the same time by sub-letting or sub-contracting the rolling, we have actually started our manufacture and we are selling our product.

President.—I am not trying to point out that such an application must be dismissed on merely *a priori* grounds. I am only trying to point out the difficulty.

Mr. Smith.—I realise the difficulty. But I think the case is more or less analogous. In this case we have stated the cost for our liquid steel and we have stated the cost of machining at the Ishapore factory.

President.—In so far as liquid steel is concerned, we have got the cost. Then after that you speak of discard and rolling loss of 15 per cent. Surely the rolling loss is included in the rolling charges.

Mr. Williams.—The loss in rolling is due to oxidisation.

President.—You pay the Ishapore Government factory Rs. 3-4-0. What does this payment include?

Mr. Williams.—For all the finished bars excluding the amount which is cut off.

President.—How much wastage is involved in the rolling process?

Mr. Williams.—5 per cent. and 10 per cent. discard from the rolled bar.

President.—There is 10 per cent. on the ingot itself.

Mr. Williams.—It is quite a reasonable figure to take. It is cut from the end of the rolled bar. It is based on actual results. Tata's also do the same thing.

President.—We don't know whether Ishapore rolling charges are reasonable.

Mr. Williams.—I may say we have asked the Superintendent, Ishapore factory, to give us his costs in detail.

President.—It must include a certain amount of profit there. It must include depreciation, etc. You are showing here Re. 1 which ought to go into Rs. 3-2-0.

Mr. Williams.—I don't know.

President.—You are only using the ingot mould. What depreciation are you entitled to here? You have already taken that into account in the other costs.

Mr. Williams.—Not in Rs. 5-13-0.

President.—You claim Re. 1 depreciation on liquid steel.

Mr. Williams.—Yes, on the plant connected with liquid steel.

President.—On what basis have you calculated that?

Mr. Smith.—I took 10 per cent. on Rs. 32,000 per annum. The electric furnace is Rs. 3,20,000 and the electric installation is Rs. 1,80,000, in all Rs. 4,28,000.

President.—I don't understand. What we have to do in this case is this. We have got to take your total production of liquid steel and then we have to allocate depreciation to liquid steel that is used in this department and separate it from depreciation in the other department.

Mr. Smith.—That is what I have done in effect.

President.—Depreciation only comes to Re. 1 a cwt., *i.e.*, Rs. 38,000 on the whole thing.

Mr. Smith.—Certainly. We calculated at 10 per cent. Now we are only taking at 6¼ per cent. and we are taking it at a less value than I took it.

President.—It would not come to even As. 4.

Mr. Smith.—It would come to As. 6.

President.—In this case you put your rolling mill at scrap value.

Mr. Williams.—We actually got it at scrap value.

President.—It is just a question of how we are to deal with it. Supposing you buy a new mill at the present moment?

Mr. Williams.—Would it do if I gave the invoice value of this mill?

President.—When was it imported? Is it worked by electricity or steam?

Mr. Williams.—It was imported two years ago. It is worked by steam.

President.—What is the value?

Mr. Williams.—£25,000.

President.—What is the rolling capacity?

Mr. Williams.—Not less than 10,000 tons.

President.—Do you propose that it should be treated as scrap? How much did you pay for it?

Mr. Williams.—I would take it at the cost of Rs. 2,00,000.

President.—That is an estimate.

Mr. Williams.—It is.

President.—The land has gone into the other department.

Mr. Williams.—Yes.

President.—Rs. 2,00,000 is the cost of erection.

Mr. Williams.—It is the cost of erection and assembling.

President.—Where is it now?

Mr. Williams.—It is now at Panchara.

President.—Is it near Asansol?

Mr. Williams.—Yes, very near to the coalfields.

President.—Is it an up to date mill?

Mr. Williams.—It is a British mill which has never been used. The mill was built towards the end of the war and intended to be erected in England. Then the war terminated. It was purchased later by the Indian Steels Company, Limited, with the intention of manufacturing spring steel. Our original scheme was to include a rolling mill as well as a steel foundry, but the proprietors were not satisfied with the progress made and they held back the question of the rolling mill. When the opportunity came to buy this plant, they bought it. As I pointed out in my report, they are all part of a lot of machinery which we bought almost for nothing.

President.—If you take only Rs. 2,00,000 as the cost of this mill, then you can hardly claim Rs. 3-2-0—the Ishapore milling charge. Obviously your charge must be much lower.

Mr. Williams.—Their rolling mill is 30 years old and it is therefore probably dead stock and they don't require to depreciate it at all.

President.—You must remember it is a Government concern.

Mr. Williams.—They carried out special trials in order to find out what their costs would be and I asked them to let me have in detail. They said they could not do so without the sanction of the Government of India. As soon as I get these figures, I shall send them to you.

President.—Here we have the cost of an old rolling mill. Probably the plant is taken at scrap value. Then we have only got the ordinary works cost. Is it safe for us to proceed on such a hypothesis?

Mr. Williams.—I understand their costs include material, labour, supervision and a certain amount of overhead, but I can't tell you exactly.

President.—Now that you have got the plant and other equipments it might be better for you to put it up and start manufacture. Apparently there is a market in the country.

Mr. Williams.—There is no question about it.

President.—In any case the difference between your price and the foreign price is not so very great assuming that these figures are correct. Would it not be better in that case for you to wait and see what happens. Supposing in the end you find that these figures are all wrong and that you cannot afford to manufacture at Rs. 11-2-0?

Mr. Williams.—We can always go to Ishapore.

President.—In that case we would be protecting your liquid steel and we would be protecting steel that is machined at Ishapore. Where does your share come in?

Mr. Smith.—On our liquid steel.

President.—Liquid steel is no good by itself. Nobody would protect it.

Mr. Smith.—It is there that we want to make our chief saving.

President.—I am trying to suggest, Mr. Smith, that it is a case in which the application seems to me to be somewhat premature.

Mr. Smith.—Unless we make the application at this stage, we shall have to work at a loss for at least a year before we can give you any costs at all. It will then take some little time before we can be heard. I should think very likely that you would wish to compare those costs with another year. It would be two years and a bit. In the meantime we have to go on losing money.

President.—It is for you to consider. I confess that I see difficulties.

Mr. Smith.—It is a difficult thing to consider, but, as I say, we have an absolute case on our liquid steel. Although you suggest that we may

not be able to do our rolling for Rs. 3-2-0 we can always get it done by Ishapore.

President.—Where is the guarantee that Ishapore will always do it for Rs. 3-2-0?

Mr. Williams.—They have accepted that after careful enquiry.

President.—How long is it for?

Mr. Williams.—They have not stated the term at all.

President.—What is their rolling capacity?

Mr. Williams.—The same as ours.

President.—How much are they producing now?

Mr. Williams.—They are only working the mills for three months in a year and then they close down.

President.—If that is the case, why are they not selling spring steel?

Mr. Williams.—I think it is against Government policy to sell in competition with private agency.

President.—So far as sales to the Railway Board are concerned, there should be no objection on that ground.

Mr. Williams.—No. That is only done with a view to keeping the staff together. They must have a certain amount of staff and in order to keep them, they accept a certain amount of outside work.

President.—I can't go into the question of costs, because they are not your costs. Your costs are only Rs. 5-13-0 for liquid steel and ingot. I can't go beyond that. The rolling charges, I can't go into.

Mr. Smith.—It is only the rolling charges that prevent you from considering the question and if I can get you the details of those charges and if consider the case?
you find that they are sufficiently comprehensive, will you then be willing to

President.—There is no guarantee then that you will be able to work up to those prices.

Mr. Smith.—Do you think that our charges may be higher?

President.—May be higher or lower.

Mr. Williams.—It is reasonable to assume that in the case of two mills of identical size and type and worked in the same district, the costs will be approximately the same.

President.—Then we havn't got the information at the other end—c.i.f. price of spring steel.

Mr. Williams.—I will send you as soon as we get the reply.

President.—So that we have no means of judging at all.

Mr. Williams.—People are beginning to realise that we are coming into competition and we are very close to the c.i.f. price. That is why I am not able to give you any information on that.

President.—Your point, I take it, is that there is no distinction between your rolled steel and Tata's rolled steel in principle.

Mr. Williams.—There is no difference.

President.—And that it should be treated on the same footing.

Mr. Williams.—Yes.

President.—I mean to say as a matter of general principle.

Mr. Williams.—There is absolutely no difference whatever as a matter of general principle.

President.—The position is this that in the former enquiry we excluded from our recommendation all kinds of steel which were not manufactured in the country. Now the position is, if I understand it right, that this is a kind of rolled steel which can be manufactured and that that you claim it ought to come into the general scheme.

Mr. Williams.—Not only can be, but is actually being manufactured.

President.—I shall put it to you this way. Supposing we charge one entry to read " all steel bars except high speed and alloy steel but including spring steel " and apply the same rate of duty to them as to the steel bars.

Mr. Williams.—Yes.

President.—You are asking for a rate of 33⅓ per cent. duty whereas you know we are not recommending any *ad valorem* duties at all. Last time, I think, we recommended Rs. 40 a ton on bars.

Mr. Williams.—That would give us Rs. 1-12-0 a cwt.

President.—Even on these figures it does not work out to 33⅓ per cent.

Mr. Smith.—Rs. 35 on what?

President.—On common merchant, and bar and rod designed for the reinforcing of all concrete sizes—it is Rs. 40, I find. In addition to that they get a bounty, which is a very different thing. How do you describe this steel?

Mr. Smith.—As rolled bar.

President.—Where does the exclusion come in? The expression used is " common merchant bar."

Mr. Smith.—It is not common merchant bar.

President.—At present it is 10 per cent. *ad valorem.*

Mr. Smith.—Yes.

Mr. Noyce.—Does this Rs. 9 c.i.f. Calcutta include duty?

Mr. Williams.—That is the price at which the material is sold in Calcutta.

President.—That includes duty.

Mr. Williams.—Yes.

Mr. Noyce.—Why do you call it c.i.f. Calcutta, then?

President.—If you work back from Rs. 180 and deduct 10 per cent. duty and say Rs. 5 for landing and other charges, then you get a c.i.f. price of about Rs. 157. Then if you add Rs. 40 for duty, it comes to Rs. 197. Tata's get about Rs. 14 on top of that as bounty. The total comes to Rs. 211. You are claiming just the same thing.

Mr. Williams.—Yes.

President.—You claim that this steel is being manufactured in the country, and that it should be included in the entry for protected bars.

Mr. Williams.—That would meet the case. It is being manufactured and sold in the country.

Mr. Smith.—The only thing necessary is to have the exclusion removed.

President.—I just want to draw your attention to the statement made that the imports of spring steel into India for 9 months ending December 1925 amounted to Rs. 7,48,000. Then you go on calculating the revenue that the Government would get, but you forget that if you manufacture spring steel in the country, the revenue would cease to come in.

Mr. Smith.—Gradually it will get less and we are asking also for a gradual decrease in the scheme of protection.

Mr. Noyce.—You have not asked for anything gradual in regard to spring steel?

Dr. Matthai.—The industry has to pay its way.

Mr. Smith.—When protection disappears on castings, the bounty also will disappear.

President.—You can get your mill going in a very short time. Why do you take as long as 5 years if you are to manufacture liquid steel and the Ishapore factory to roll it? Why should there be such a long interval?

Mr. Smith.—We have to find a market.

President.—The market is there.

Mr. Smith.—If you put on a duty, we can compete.

President.—If the duty is there it must be for a certain purpose or it fails of its purpose. If you get protection, it must be adequate. In that case where is your revenue?

Mr. Smith.—I think we have still got the prejudice to be considered for sometime. It has been proved so much in the past that we must expect it when we introduce a new material.

President.—We will have to show these results to our expert when he comes and he will have to judge for himself.

Mr. Smith.—There is one more point I should like to say about the effect of an import duty and that is in order to make this, we are now using a class of scrap which was non-exportable in the past and went into waste. Therefore the railways who would be the chief people affected by the duty on spring steel are getting something back in the way of selling their borings and turnings for which they had no use before and which had to be thrown away.

President.—What is the idea of the argument?

Mr. Smith.—That railways who eventually pay most of the duty on spring steel will be getting back a return of As. 8 a cwt. We are only asking for Rs. 2 a cwt. and they get 25 per cent. back.

President.—That is negligible from the Railway point of view.

Dr. Matthai.—You are asking for a duty of Rs. 1-8-0 net a cwt.

Mr. Smith.—Yes.

President.—On page 2 of the representation, dated 12th May 1926, you say some practical tests were carried out.

Mr. Williams.—Yes, with reference to the spring steel.

President.—I don't see how that test was any better than the previous test. It was simply a mechanical test.

Mr. Williams.—It is not quite the same.

President.—What is the difference?

Mr. Williams.—The test that the railways carried out was on a complete finished manufactured spring. It was tested as near as they could possibly do it under the same conditions as if they were in service in a wagon, that is to say they tried to reproduce in a machine the vibration and the pressure that is brought to bear on the spring when the carriage is running.

President.—How did they reproduce climate conditions? In practice that is the most important thing.

Mr. Williams.—They call this a very practical test.

President.—It is more a theoretical than a practical test.

Mr. Williams.—It is submitted to stresses far in excess of anything it is likely to get in service.

President.—The Ishapore works have been manufacturing spring steel for sometime?

Mr. Williams.—It is sometime since they made the first lot.

President.—I want to know whether this spring steel has been used by others and what has been their experience?

Mr. Williams.—I am giving you the results of these tests which are called practical tests.

President.—These are laboratory tests.

Mr. Williams.—It is the routine test which they apply to all spring steel which they buy.

President.—That is where you find it difficult to get over the prejudice. You may fulfil all these tests but some people will insist that without an experience of 40 years they can not say whether Indian steel is as satisfactory as British steel.

Mr. Williams.—That will be the attitude of some engineers. I can tell you that the Locomotive and Carriage Superintendent of the Eastern Bengal Railway and the Deputy Chief Mechanical Engineer of the East Indian Railway are so satisfied that they have instructed their Controllers of Stores to put us on their list and to accept it in all cases where the prices are low and we have actually started selling spring steel to the East Indian Railway and Eastern Bengal Railway.

President.—I take it that the main thing is the absence of phosphorous and sulphur.

Mr. Williams.—Yes.

President.—How much is it lower than in the ordinary basic steel?

Mr. Williams.—It will probably run up to ·07 in structural steel.

President.—As much as that?

Mr. Williams.—Structural steel may be ·09.

President.—I am talking of the British Standard Specification.

Mr. Williams.—Phosphorous ·07. Sulphur ·05.

President.—That is the same as spring steel.

Mr. Williams.—We have not anything like that.

President.—Those are the two principal things.

Mr. Williams.—Those are the two things, so far as chemical analysis goes.

Dr. Matthai.—What about carbon?

Mr. Williams.—It runs from ·6 to ·8. It is a very important item. It is not less than ·5 and not more than ·8. We are well within British Standard specifications in all cases and in the case of phosphorous and sulphur we are better.

Dr. Matthai.—This is the analysis practically of your liquid steel.

Mr. Williams.—Yes.

Dr. Matthai.—So that casting also will be of the same analysis.

Mr. Williams.—No, because we do not take quite the same care in the case of casting as we would in the case of spring steel.

President.—You say that spring steel is required for munition purposes. Is this the kind of steel that an ordnance factory would require?

Mr. Williams.—Very similar indeed. It is not such a highly refined product, but it is something better than ordinary structural steel. It has to be worked to a closer specification.

President.—It will be better than your average steel casting but it would not be as good as ordnance steel?

Mr. Williams.—Yes, except in the case of steel for gun tubes and barrels, and munitions of that sort which are subject to enormous stresses and strains.

President.—As regards this test, there is one thing I want to know. In Ishapore, that is the only test they have made from the military point of view?

Mr. Williams.—Yes. They have also made occasional tests of castings which we have supplied for gun mountings. But for this class of steel, that is the only test they have made.

Dr. Matthai.—The view I take about your application for the protection of spring steel is this. Ordinarily, if we are going by the policy laid down by the Fiscal Commission, we don't grant protection to an industry which is not already in existence. It is only in the case of an industry which is in existence and which is in its infant stage that we consider the question of protection, so that as spring steel industry is not in existence, it is outside the category. The only way in which, as far as I am concerned, I can exempt spring steel from that, is to consider the development of spring steel as one of the means of developing the steel casting industry.

Mr. Williams.—This is one of the means of developing the steel casting industry.

Dr. Matthai.—Therefore till we have made up our mind about steel castings, we cannot consider the question of spring steel. If we protect steel castings, then it becomes our duty to do everything else that may be necessary in order to hasten the development of the steel casting industry. On that basis, you may say that there is a ground for protecting spring steel.

Mr. Williams.—The two are undoubtedly connected. What affects one affects the other.

Dr. Matthai.—The President has already pointed out the difficulty we feel with regard to estimating your costs on which we may base our scale of protection. We have really no *data* to go upon. The only *data* we have are those which you have given from the Ishapore factory. My difficulty there is that even where they have commercial accounts in a Government factory, the costs are often under-stated. You do not find various things in their commercial accounts which in the ordinary course would find a place in them in a factory run by a private agency.

Mr. Noyce.—More especially in the matter of overhead charges.

Dr. Matthai.—Simply on the basis of Ishapore costs it would be very unsafe to proceed.

Mr. Smith.—Before you have them in detail in front of you.

Mr. Noyce.—Even if we did have them before us, it would be difficult.

Dr. Matthai.—There is one other point following on what I said earlier. Supposing you get protection for spring steel and that side of your business is developed, it will come to this. You have got an estimated definite demand for 2,000 tons of steel castings and then according to the figures given in the Trade Returns you say that the demand for spring steel exceeded 4,000 tons during 9 months of 1925. Against that, you have got a capacity of 12,000 tons for liquid steel, including the capacity of furnaces now held in reserve. When the other furnaces come into operation, the difficulty I pointed out about steel casting would also apply here.

Mr. Williams.—Not altogether, because the steel furnaces that we have in reserve are part of the enormous lot of plant that we bought at scrap price.

Dr. Matthai.—The scrap price is a very difficult question as far as we are concerned. We have got to prescribe a scale of protection and then the people interested in it would put money into this.

Mr. Williams.—We have not considered the costs of these furnaces on the same basis as the cost of a brand new mill costing £25,000. If we were to do that, it would be a serious question. As it is, the plant is hardly worth anything.

Mr. Noyce.—You say that you manufacture spring steel, and you base your application for protection on the ground that you are already manufacturing spring steel. How much have you actually manufactured?

Mr. Williams.—It would probably run into 200 tons.

President.—In what time?

Mr. Williams.—We have been merely making ingots.

Mr. Noyce.—How much have you sold of spring steel?

Mr. Williams.—I could not tell you exactly because it was made up of a large number of small orders; say, a quarter of what we have manufactured we have actually sold.

Mr. Noyce.—About 50 tons?

Mr. Williams.—Yes.

Mr. Noyce.—You have got the rest on hand?

Mr. Williams.—Yes. It is impossible to carry on the spring steel industry without holding stocks. It may be called for in odd sizes which we will have to supply at very short notice and we cannot afford to wait.

Mr. Noyce.—When did you start manufacturing spring steel?

Mr. Williams.—Within the last six months.

Mr. Noyce.—With a view to applying for protection for it?

Mr. Williams.—As part of the original scheme which we had in mind when we founded the steel foundry.

President.—Spring steel can only be used for making springs and in the making of munitions.

Mr. Williams.—Yes.

President.—Is there any other use to which it can be put?

Mr. Williams.—No, not in any quantity worth mentioning.

Mr. Noyce.—What price have you actually got for your spring steel?

Mr. Williams.—We have realised Rs. 11.

Mr. Noyce.—Have you included your output of 200 tons or 4,000 cwts. of spring steel in your 13,740 cwts. of castings?

Mr. Smith.—No.

Mr. Noyce.—As regards works costs, have you included that?

Mr. Smith.—No. Spring steel is entirely separate.

Mr. Noyce.—This price of Rs. 9 a cwt. you quote for, what steel is it? Is it continental or British?

Mr. Williams.—I think it is continental, but I am not sure.

Mr. Noyce.—How long ago did you get this quotation?

Mr. Williams.—Within the last two months.

Mr. Noyce.—You do not exactly know what it was for.

Mr. Williams.—This is for common spring steel sections such as we are making.

President.—Supposing we came to the conclusion that spring steel is a kind of rolled steel manufactured in the country, in that case you claim that this steel also must be treated in the same way as the other kinds of protected steel.

Mr. Williams.—Yes.

President.—In the case of protected rolled steel bar the duty is Rs. 40 a ton.

Mr. Williams.—Does that cover the whole range of Tata's products?

President.—No. Your steel can only come under bars. Your case is that your bars should be included in the same class as Tata's rolled bars.

Mr. Williams.—Yes.

President.—You want 33⅓ per cent. duty. Rs. 40 per ton may be more or it may be less than that, I do not know.

Mr. Williams.—We will be content with whatever you give in the case of Tata's.

President.—Supposing the same duty is retained, it gives you Rs. 2 a cwt.

Mr. Williams.—I should consider that ample to cover any slight difference in the rolling cost between ourselves and Ishapore.

President.—Quite so, if the duty amounted to Rs. 40 a ton. I am taking the tariff at present in force.

Mr. Williams.—I follow the point.

Mr. Noyce.—You do not propose to put up your rolling mill without protection. What is your idea for the future?

Mr. Smith.—We should put it up in any case.

Mr. Noyce.—When?

Mr Smith.—Immediately, our idea being that even if we made no profit on spring steel, we should still bring down the cost of liquid steel.

Mr. Noyce.—When did you buy it?

Mr. Smith.—Within the last six months.

President.—There is a definite demand of 4 to 5 thousand tons of spring steel in the country, in addition to castings, for both of which you require liquid steel. Unless you brought the other furnaces into operation, you won't have enough steel.

Mr. Williams.—That is a very simple matter. We have got the furnaces. It is merely a question of erecting them.

President.—If you are able to dispose of this steel, you may be able to bring down the price of steel castings.

Mr. Williams.—That is the reason why we are anxious to develop the manufacture of spring steel.

6. ANGUS ENGINEERING WORKS.

A.—Written.

(1) *Representation, dated the 11th June 1926.*

Owing to our continued inability to meet severe competition from the United Kingdom, in the manufacture of fittings for railway wagons, we have been led to an investigation of the subject of tariff rates on the raw material and the finished article.

2. Early last year we secured a contract for the supply of fittings at prices which resulted in a heavy loss to us. We were more fortunate in getting better prices at the beginning of this year, but we again find in negotiating for new business that we have been undercut by United Kingdom suppliers.

3. The enclosed schedule shows the results of our investigations.

Referring to the schedule, we have shown under "tariff amount raw material" the actual duty paid by us on the raw material. The column showing c.i.f. selling amount of the finished article necessarily contains estimated representative figures, but we have been careful not to under-estimate these figures. As a matter of fact the figures given represent our selling price in India, for our last completed contract, and we are forced to this level by direct competition from United Kingdom and it is, we think, a fair contention that in labelling these prices c.i.f., we have certainly erred on the side of over-estimating them.

4. In comparing the tariff amounts we pay, with the estimated maximum tariff amounts paid on the imported finished article, it will readily be apparent that the protection now given to the steel industry operates against the interests of Indian manufacturers of wagon fittings, a position which calls for redress, apart from all considerations of protection.

5. An examination of the totals of the columns "tariff amount raw material" and c.i.f. selling amount, indicates that the former amounts to 13·6 per cent. of the latter. The inference is that to place the Indian manufacturer of these specific items on a merely equal footing with foreign competitors requires a duty of 13·6 per cent. on the imported finished article.

6. On this basis we strongly support the plea of the manufacturers of wagons for an increase of protection on wagons and underframes.

7. As to the method of conferring this protection, we unhesitatingly suggest that a revised tariff be substituted for the present bounty. We desire to point out that under the bounty system we, as manufacturers of component parts for railway wagons, derive no benefit whatever, and therefore plead for an increased tariff to include not only the complete wagons and underframes but also all fittings entering into their manufacture.

Enclosure.

A—2 Type wagon fittings. Quantities are for 100 wagons.

Drawing No.	Mark	Name.	Number.	Material.	Weight of material each.	Weight of material required.	Tariff rate.	Tariff amount of raw material.	C. I. F. selling rate.	C. I. F. selling amount.	Tariff amount 10 per cent. of selling amount. Finished article.
					lbs.	Cwt. Qr. lbs.	Rs.	Rs. A. P.	per 100	Rs.	Rs. A. P.
S2-1	A	Brackets for securing chainless cottar	800	M. S.	4½	32 0 16	40 Ton.	64 4 6	40	320	32 0 0
,,	A	Chainless cottars for securing doors	400	,,	5¼	18 3 0	,,	37 8 0	76	304	30 6 4
,,	H	Swing door bolts	200	,,	10	17 3 12	,,	35 11 6	120	240	24 0 0
S3-1	M	Door Hinge Pin	1400	,,	1·83	22 3 14	,,	45 12 0	28	392	39 3 2
S9-1	C	Axle guard bridles	400	,,	7·12	25 1 20	,,	50 13 9	120	480	48 0 0
S10-1	C	Washers for springs	400	,,	9	32 0 16	,,	64 4 6	100	400	40 0 0
S18-1	D	Vertical lever including 3 bushes	400	,,	14	50 0 0	,,	100 0 0	220	880	88 0 0
,,	G	Vertical lever hanger	200	,,	7	12 2 0	,,	25 0 0	100	200	20 0 0
,,	J	Brake Block hanger bracket (R. & L.	400	,,	11	39 1 4	,,	78 9 3	140	560	56 0 0
,,	O	Brake beam safety hanger	400	,,	7	25 0 0	,,	50 0 0	100	400	40 0 0
S19-1	L	Train pipe clips	400	,,	2·37	8 1 24	,,	16 14 9	32	128	12 12 9
,,	O	Brake block hanger bolts Nuts for above Split pins for above	400	,,	4·14	14 3 4	,,	29 9 3	36	144	14 6 4
,,	P	Vertical brake lever hanger bolts Split pins for above Nuts for above Washers for above	100	,,	3·7	3 1 6	,,	6 9 9	32	32	3 3 2
,,	Q	Vertical brake lever hanger bolts Nuts for above Split pins for above Washers for above	200	,,	2·59	4 2 14	,,	9 4 0	30	60	6 0 0
,,	S	Vibrator, hanger, 6 nuts and ferrule	100	,,	8·66	7 2 26	,,	15 7 6	129	120	12 0 0
,,	T	Cottars for above (adjusting pin)	200	,,	·15	2 2 20	,,	5 5 9	16	32	3 3 2
,,	U	Vertical lever bracket pin Vertical lever washer Vertical lever split pin	100	,,	4·75	4 0 27	,,	8 7 9	32	32	3 3 2
								643 10 3		4,724	472 6 1

(2) *Letter from the Angus Engineering Works, dated the 19th July 1926.*

CLAIM FOR PROTECTION ON WAGON FITTINGS.

We take pleasure in sending under cover of this letter seven copies of all correspondence, evidence, etc., excepting two copies of Exhibit No. 2 which you may please take from files now in your possession.

It may also please be noted that columns I, J and K of Exhibit No. 1 have been altered as requested by the President of the Board.

CLAIM FOR PROTECTION ON WAGON FITTINGS PREFERRED BY ANGUS ENGINEERING WORKS.

Owing to our continued inability to meet severe competition from the United Kingdom in the manufacture of fittings for railway wagons, we have been led to an investigation of the subject of tariff rates on the raw material and the finished article.

Early last year we secured a contract for the supply of fittings at prices which resulted in a heavy loss to us. We were more fortunate in getting better prices at the beginning of this year, but we again find in negotiating for new business that we have been undercut by United Kingdom suppliers.

The attached exhibits show the results of our investigations.

EXHIBIT I.

On this exhibit we have shown all items which we manufacture from steel dutiable at the specific rate of Rs. 40 per ton, and reference to columns H and K will show that we, as manufacturers in India, are liable to have to pay Rs. 1,615 for our raw material whereas the railways or others may import foreign manufactures at Rs. 1,463.

The inferences are:—

(*a*) to place the Indian manufacturers on an equal footing with foreign competitors requires a duty of 11·04 per cent. on imported finished articles.

(*b*) to place the Indian manufacturers on the basis they were prior to granting of special protection to the steel industry necessitates revision of the duty on the imported finished article from 10 per cent. to 17·72 per cent.

EXHIBIT 2.

Reference to columns G and I of the first batch manufactured will indicate that our selling price equal to c.i.f. price *plus* duty was only 48·6 per cent. of our cost price. Reference to columns G and I of the second batch will indicate that selling price was only 61·4 per cent. of cost.

EXHIBIT 2-A.

Taking selling price as a basis figure we get the following results:—

(*a*) On the first batch of forgings for which we have records our loss was 105·72 per cent. on sales value.

(*b*) On the second batch of forgings completed to date our loss is 62·78 per cent. on sales value.

(c) When (a) and (b) are compared good progress in reduction of cost is evident but this is more pronounced when the specific articles in the second batch are compared with the same articles in the first batch.

1st Batch—Loss	137·64
2nd Batch—Loss	62·78
Difference in Loss .	74·86

The inferences are:—

(a) Indian manufactures at the present time are unable to compete without protection with foreign competitors.

(b) Given time to perfect their methods and train their labour there appears reasonable prospects of Indian manufacturers ultimately being able to compete on an equal footing.

EXHIBITS 4 AND 4-A.

These exhibits are attached to shew that cost figures taken in exhibits 2 and 2-A are our actual costs for our forge shop and are true to the best of our knowledge and belief.

EXHIBIT 5.

We have carefully perused Tariff Schedules, and have set forth in the exhibit such items as appear to us to substantiate our claim for protection.

EXHIBIT 5-A.

We have set forth in this exhibit such items as are manufactured at Angus Engineering Works or for which the plant is adapted.

The inferences are:—

(a) most branches of the engineering industry are protected to the extent of 15 per cent. to 30 per cent. or by specific duties, excepting:—

88—51-A 87—51	Machinery and transmission gear at .	2½ per cent.
101—63 and 63-A	Railway material at . . .	10 per cent.

(b) Those branches of engineering using steel dutiable Rs. 40 per ton are protected at 25 per cent. or by specific duties, excepting:—

101—63 and 63-A Railway material

CONCLUSIONS.

We base our claim for a tariff of 25 per cent. on wagon fittings on equity.

Exhibit 1 clearly shews that the protection granted to the steel-making industry now has us operating at a disadvantage of 1·4 per cent., and to put us on a footing equal to that which we enjoyed prior to granting of such protection requires revision of the tariff from 10 per cent. to 17·72 per cent.

Exhibit 2 clearly shews that revision of the tariff to 17·72 per cent. would still have us operating at a loss, so we respectfully request that our claim for 25 per cent. may be granted to help us along until such time as our labour is trained.

We submit that engineering in all its branches is of as much national importance as steel-making, and any revision of tariffs in connection with the latter industry should apply in equity to engineering.

(1) Of what use are rails to the railway authorities if locomotives, wagons, and carriages are not available?

(2) Of what use are the several sections of steel to Indian industry generally if engineering workshops are not existing to fashion them to the diverse needs of industry?

(3) Of what use is steel to the Army in India, if workshops are not existing to turn it into munitions or weapons?

(4) Where, in times of need, can the Army in India hope to recruit personnel for its technical units, if, in times of peace, no workshops are available as training schools?

Exhibit 5 shews that several branches of engineering have already been granted tariffs at 25 per cent. and we, as manufacturers of wagon and railway fittings, claim the same protection.

Further reference to Exhibit 5 will shew that practically every branch of engineering is protected, by at least 15 per cent., and had Angus Engineering Works been protected to the extent we claim it should be, our cash loss for the first six months of the current year would have been less by Rs. 1,12,518, as set forth in Exhibit 3.

Exhibit No. 1.

Exhibit showing amount of special p otection granted to Steel-making Industry per set o· 100 Wagons

A.	B	C	D	E	F	G	H	I	J	K	L
Drg. No.	Make.	Article.	Number required.	Weight of material, each.	Weight of material required.	Class and Tariff per ton.	Duty paid on steel at specific Tariffs.	Approximate C.I.F. price per 100.	Approximate C.I.F. value.	Duty paid at 10 per cent. on C.I.F. value.	Remarks.
				lbs.	C. Q. L.	Rs.					
S-2/1	A.	Brackets for securing chainless Cottar.	800	1·64	11 2 24	M.S. 40	23 7 0	38 15 0	311 8 0	31 2 4	
,,	A.	Chainless Cottars for securing Doors	400	2·55	9 0 12	,, 40	18 3 6	73 15 9	295 15 0	29 9 6	
,,	A.	Washers for packing .	400	·36	1 1 4	,, 40	2 9 3	19 7 6	77 14 0	7 12 7	
,,	B.	Chainless Cottars .	400	2·96	10 2 8	,, 40	21 2 3	73 15 9	295 15 0	29 9 6	
,,	D.	Swing Door Hook .	400	·26	0 3 20	,, 40	1 13 9	19 7 6	77 14 0	7 12 7	
,,	D.	Eye for Door Hook— ⅜" dia. shank. .	400	·31	1 0 12	,, 40	2 3 6	31 2 5	124 9 8	12 7 4	
,,	D.	½" dia. shank . .	400	·3	1 0 8	,, 40	2 2 3	31 2 5	124 9 8	12 7 4	
,,	E.	Swing Door Bolt Guides	600	1·3	6 3 24	,, 40	13 14 9	50 9 11	303 11 6	30 5 10	
,,	F.	Hand Hold . . .	100	1·81	1 2 13	,, 40	3 3 9	50 9 11	50 9 11	5 1 0	
,,	G.	Pin for Swing Door Bolt Guides.	200	·61	1 0 10	,, 40	2 2 9	23 5 10	46 11 8	4 10 9	
		Carried over .	...	...	45 1 23	...	90 14 9	...	1,709 6 5	170 14 9	

A	B	C	D	E	F	G	H	I	J	K	L
Drg. No.	Make.	Article.	Number required.	Weight of material, each.	Weight of material required.	Class and Tariff per ton.	Duty paid on steel at specific Tariffs.	Approximate C.I.F. price per 100.	Approximate C.I.F. value.	Duty paid at 10 per cent. on C.I.F. value.	Remarks.
		Brought forward .	...	lbs. ...	C. Q. L. 45 1 23	... Rs.	90 14 9	...	1,709 6 5	170 14 9	
S-2/1	H.	Swing Door Bolts .	200	9·00	16 0 8	M. S. 40	32 2 3	155 12 0	311 8 0	31 2 4	
,,	J.	Swing Door Eye Bolts	200	·85	1 2 2	,, 40	3 0 6	31 2 5	62 4 10	6 3 7	
S-3/1	M.	Door Hinge Pin . .	1,400	1·76	22 0 0	,, 40	44 0 0	27 4 1	381 9 2	38 2 6	
,,	N.	Door Sealing Plates .	400	·7	2 2 0	,, 40	5 0 0	15 9 3	62 5 0	6 3 8	
S-9/1	C.	Axle Guard Bridles .	400	7·18	25 2 16	,, 40	51 4 6	116 13 0	467 4 0	46 11 7	
,,	E.	Spring Shackles . .	1,600	4·5	64 1 4	,, 40	128 9 3	93 7 2	1,495 2 8	149 8 3	
,,	F.	Spring Shackle—Pins	1,600	3·64	52 0 0	H. T. S. 40	104 0 0	46 11 7	747 9 4	74 12 1	
,,	G.	Cottars . . .	1,600	·11	1 2 8	,, 40	3 2 3	19 7 6	311 8 0	31 2 4	
,,	K.	Axle Guard Bridle Studs.	800	·6	4 1 4	,, 40	8 9 3	19 7 6	155 12 0	15 9 2	
S-10/1	B.	Draw Bar Spindles .	400	15·00	53 2 8	,, 40	107 2 3	311 8 0	1,246 0 0	124 9 7	
,,	B.	Nuts for above (Bazar purchased).									
,,	B.	Cottars . . .	400	·36	1 1 4	M. S. 40	2 9 3	19 7 6	77 14 0	7 12 7	
		Carried over	...	...	290 0 21	...	580 6 3	...	7,028 3 5	702 12 5	

A	B	C	D	E	F	G	H	I	J	K	L
Drg. No.	Make.	Article.	Number required.	Weight of material, each.	Weight of material required.	Class and Tariff per ton.	Duty paid on steel at specific Tariffs.	Approximate C. I. F. price per 100.	Approximate C. I. F. value.	Duty paid at 10 per cent. on C. I. F. value.	Remarks.
				lbs.	C. Q. L.						
		Brought forward .	..	...	290 0 21	...	580 6 3	...	7,028 3 5	702 12 5	
							Rs.				
S-10/1	C.	Washers for Springs .	400	8·00	28 2 8	M. S. 40	57 2 3	97 5 6	389 6 0	38 15 0	
,,	D.	Spring Shackles . .	400	8·00	28 2 8	,, 40	57 2 3	97 5 6	389 6 0	38 15 0	
S-11/1	B.	Suspender Hook . .	200	5·23	9 1 10	,, 40	18 10 9	233 10 0	467 4 0	46 11 7	
S-18/1	D.	Vertical—Lever . . .	400	10·51	37 2 4	,, 40	75 1 3	214 2 6	856 10 0	85 10 7	
,,	F.	Bkts	100	8·00	7 0 16	,, 40	14 4 6	155 12 0	155 12 0	15 9 2	
,,	G.	Hanger . . .	200	6·5	11 2 12	,, 40	23 3 6	97 5 6	194 11 0	19 7 6	
,,	J.	Brake Block Hanger Bkt. (R. and L.)	400	9·31	33 1 0	,, 40	66 8 0	136 4 6	545 2 0	54 8 2	
,,	O.	Brake Beam Safety Hanger.	400	7·46	26 2 16	,, 40	53 4 6	97 5 6	389 6 0	38 15 0	
,,	P.	Short Pull Rods . .	200	17·00	30 1 12	,, 40	60 11 6	681 6 6	1,362 13 0	136 4 6	
,,	Q.	Vertical Lever Bush .	1,200	·45	4 3 8	,, 40	9 10 3	31 2 5	373 13 0	37 6 0	
S-19/1	B.	Hand Brake lever chainless pin and washer.	100	2·22	1 3 26	,, 40	3 15 6	70 1 5	70 1 5	7 0 1	
,,	D.	Pull Rods . . .	100	42·00	37 2 0	,, 40	75 0 0	720 5 6	720 5 6	72 0 6	
		Carried over .	...	..	547 2 1	...	1,095 0 6	...	12,942 13 4	1,294 3 6	

A	B	C	D	E	F	G	H	I	J	K	L
Drg. No.	Make.	Article.	Number required.	Weight of material, each.	Weight of material required.	Class and Tariff per ton.	Duty paid on steel at specific Tariffs.	Approximate C. I. F. price per 100.	Approximate C. I. F. value.	Duty paid at 10 per cent. on C. I. F. value.	Remarks.
		Brought forward .	...	lbs. ...	C. Q. L. 547 2 1	Rs. ...	1,095 0 6	...	12,942 13 4	1,294 3 6	
S-19/1	E.	Connecting rods . .	100	53·00	47 1 8	M. S. 40	94 10 3	992 14 6	992 14 6	99 4 7	
,,	L.	Train pipe clips . .	400	2·5	8 3 20	,, 40	17 13 9	31 2 5	124 9 8	12 7 4	
,,	M.	Pull rod pins . .	200	1·97	3 2 2	,, 40	7 0 6	27 4 1	54 8 2	5 7 2	
,,	O.	Brake Block hanger bolts.									
		Nuts for above (Bazar purchased).	400	4·14	14 3 4	,, 40	29 9 3	35 0 8	140 2 8	14 0 3	
		Split pins for above .									
,,	P.	Vertical brake lever hanger bolts.									
		Nuts for above (Bazar purchased).	100	3·7	3 1 6	,, 40	6 9 9	31 2 5	31 2 5	3 1 10	
		Split pins for above .									
,,	Q.	Vertical brake lever hanger bolts.									
		Nuts for above (Bazar purchased).									
		Split pins for above .	200	2·59	4 2 14	,, 40	9 4 0	29 3 3	58 6 6	5 13 5	
		Washers for above .									
		Carried over .	...	..	629 3 27	...	1,260 0 0	...	14,344 9 3	1,434 6 1	

A	B	C	D	E	F	G	H	I	J	K	L
Drg. No.	Make.	Article.	Number required	Weight of material, each.	Weight of material required.	Class and Tariff per ton.	Duty paid on steel at specific Tariffs.	Approximate C. I. F. price per 100.	Approximate C. I. F. value.	Duty paid at 10 per cent. on C. I. F. value.	Remarks.
		Brought forward	...	lbs. t ...	C. Q. L. 629 3 27	Rs. ..	1,260 0 0	...	14,344 9 3	1,434 6 1	
S-19/1	S.	Vibrator, Hangers, 6 nuts and Ferrule..	100	9·57	8 2 5	M. S. 40	17 1 6	155 12 0	155 12 0	15 9 2	
,,	T.	Pull rods adjusting pin	200	1·8	3 0 24	,, 40	6 6 9	35 0 8	70 1 4	7 0 1	
		Washers for above									
		Cottars for above (Adjusting pin).	200	·15	0 1 2	,, 40	0 8 6	15 9 3	31 2 6	3 1 10	
,,	U.	Vertical lever—									
		Bkts. pin . . .									
		Washers .	100	4·59	4 0 11	,, 40	8 3 3	31 2 5	31 2 5	3 1 10	
		Split pins . .									
		TOTAL .	..	...	646 0 13	...	1,292 4 0		14,632 11 6	1,463 3 0	
		Add for Wastage 25 per cent.	...	...	161 2 3	...	323 1 0				
			...	.	807 2 16	...	1,615 5 0				
		Take 807-2-16 at Rs. 6 per cwt. being C. I. F. price British steel.	...	...	Rs. 4,845 13 9	10 per cent.	484 9 3				
		Difference representing amount of special protection granted the steel-making industry	...	...	...	...	1,130 11 9				

Exhibit No 2.

EXHIBIT SHOWING COST OF PRODUCING WAGON FITTINGS, GIVING COMPARATIVE COST WHEN FIGURES AVAILABLE.

FIRST MAKER.

A Reg. No.	B Sheet	C Articles	D Quantity.	E Date completed.	F Selling price per C. W. Agents (per cwt).	G Sales value.	H Cost price, each.	I Total cost.	J Profit.	K Loss.	L Percentage Profit or Loss.	M Remarks.
											Per cent.	
R 313	A	Brackets for securing Chequer Cornes	1,344	31-12-01	40 12 0	537 0 0	0 7 0	470 8 0	66 12 0		14	
R 314	A	Chequer Corners for Securing Seat	1,400	27-6-01	50 0 0	1,750 0 0	1 5 0	1,470 0 0	280 0 0		19	
R 315	A	Washer for pedday	2,100	27-6-01	35 0 0	367 0 0	0 3 6	315 0 0	52 0 0		17	
R 316	A	Chequer Corner	1,512	27-6-01	50 0 0	1,890 0 0	1 5 0	1,587 0 0	303 0 0		19	
R 317	A	Swing Door R ank	1,200	24-6-01	35 10 0	504 0 0	0 9 0	432 0 0	72 0 0		16	
R 318	A	Eye for Door Hook 4½" Hook	1,050	24-6-01	35 0 0	252 0 0	0 4 0	168 0 0	84 0 0		50	
R 319	A	Hinge 12" Hook	1,050	24-6-01	35 0 0	252 0 0	0 4 0	168 0 0	84 0 0		50	
R 320	A	Swing Door Bolt Socket	800	27-6-01	30 0 0	180 0 0	0 3 0	120 0 0	60 0 0		50	
R 321	A	Bolt Socket	400	24-6-01	40 10 0	168 0 0	0 5 0	140 0 0	28 0 0		20	
R 322	A	Plate for Swing Door Bolt Socket	400	24-6-01	30 0 0	60 0 0	0 3 0	120 0 0		60 0 0	50	Profit.
R 323	A	Swing Door Bolt	800	24-6-01	35 0 0	140 0 0	0 4 0	160 0 0		20 0 0	14	
R 324	A	Swing Door Eye Bolt	800	24-6-01	35 0 0	140 0 0	0 4 0	160 0 0		20 0 0	14	
R 325	A	Flap Door Hinges	200	27-6-01	35 0 0	35 0 0	0 3 0	30 0 0	5 0 0		16	
R 326	A	Flap Door Bolt	200	27-6-01	30 0 0	30 0 0	0 3 0	30 0 0				
R 327	A	Flap Door Bolt	1,400	24-6-01	35 0 0	1,225 0 0	0 4 0	980 0 0	245 0 0		25	
R 328	A	Flap Door Catch Hinges	1,400	24-6-01	35 0 0	1,225 0 0	0 4 0	980 0 0	245 0 0		25	
R 329	A	Flap Door Rod	700	27-6-01	30 0 0	105 0 0	0 3 0	90 0 0	15 0 0		16	
R 330	A	Swing Door Hinges	2,100	24-6-01	35 0 0	1,225 0 0	0 4 0	840 0 0	385 0 0		45	
R 331	A	Swing Door Bolt	2,100	24-6-01	35 0 0	1,225 0 0	0 4 0	840 0 0	385 0 0		45	
R 332	A	Door Hinge Pin	4,200	31-12-01	40 0 0	1,680 0 0	0 5 0	1,050 0 0	630 0 0		60	
R 333	A	Bolt Small Hook	400	24-6-01	35 0 0	140 0 0	0 4 0	160 0 0		20 0 0	14	
R 334	A	Door Spring Plate	1,400	24-6-01	35 0 0	490 0 0	0 4 0	560 0 0		70 0 0	14	
R 335	A	Spring Shackles	1,176	27-6-01	35 0 0	1,543 10 0	0 5 0	1,470 0 0	73 10 0		5	
R 336	A	Spring Shackle Pin	2,352	27-6-01	35 0 0	1,764 0 0	0 3 0	1,058 4 0	705 16 0		66	
R 337	A	Spring Shackle Collar	2,352	27-6-01	35 0 0	1,764 0 0	0 3 0	1,058 4 0	705 16 0		66	
R 338	A	Axle Guard Bolts, Nut	2,744	27-6-01	35 10 0	980 0 0	0 3 0	1,029 0 0		49 0 0	5	
R 339	A	Door Bar Handle	800	24-6-01	35 0 0	1,400 0 0	0 4 0	1,120 0 0	280 0 0		25	
R 340	A	Hasp for above										
R 341	B	Cleats	1,344	31-12-01	40 12 0	537 0 0	0 3 0	403 12 0	133 8 0		33	
R 342	B	Washer for Spring	1,400	27-6-01	50 0 0	1,750 0 0	1 5 0	1,470 0 0	280 0 0		19	
R 343	B	Spring Shackles	1,400	27-6-01	50 0 0	1,750 0 0	1 5 0	1,470 0 0	280 0 0		19	
R 344	B	Footplate Stay	1,344	27-6-01	40 0 0	537 0 0	0 3 0	403 12 0	133 8 0		33	
R 345	B	Footplate Stay, including 2 Plates	1,344	31-12-01	40 12 0	537 0 0	0 3 0	403 12 0	133 8 0		33	
					Carried forward	34,701 0 0		28,450 0 0	6,251 0 0		Total Gain	

SECOND MAKER.

A Reg. No.	B Sheet	C Articles	D Quantity.	E Date completed.	F Selling price per C. W. Agents (per cwt).	G Sales value.	H Cost price, each.	I Total cost.	J Profit.	K Loss.	L Percentage Profit or Loss.	M Remarks.
											Per cent.	
R 313	A	Brackets for securing Chequer Corner	2,100	31-12-01	40 12 0	1,406 0 0	0 12 0	1,260 12 0	45		14	
R 314	A	Chequer Corners for Securing Seat										
R 315	A	Washer for pedday										
R 316	A	Chequer Corner										
R 317	A	Swing Door R ank	1,200	31-12-01	35 0 0	882 0 0	0 7 6	900 0 0		18 0 0	2	
R 318	A	Eye for Door Hook 4½" Hook										
R 319	A	Hinge 12" Hook	1,400	31-12-01	35 10 0	1,407 0 0	1 2 0	1,176 0 0	231		19	
R 320	A	Swing Door Bolt Socket	800	31-12-01	35 0 0	336 0 0	0 5 0	280 0 0	56 0 0		20	
R 321	A	Bolt Socket										
R 322	A	Plate for Swing Door Bolt Socket										
R 323	A	Swing Door Bolt	1,400	31-12-01	40 10 0	1,407 0 0	1 0 0	1,176 0 0	231		19	
R 324	A	Swing Door Eye Bolt										
R 325	A	Flap Door Hinges	1,400	31-12-01	35 0 0	980 0 0	0 7 0	980 0 0				
R 326	A	Flap Door Bolt										
R 327	A	Flap Door Bolt										
R 328	A	Flap Door Catch Hinges										
R 329	A	Flap Door Rod										
R 330	A	Swing Door Hinges	2,100	31-12-01	35 0 0	1,225 0 0	0 7 0	1,470 0 0		245 0 0	20	
R 331	A	Swing Door Bolt	2,100	31-12-01	35 0 0	1,225 0 0	0 7 0	1,470 0 0		245 0 0	20	
R 332	A	Door Hinge Pin	4,200	31-12-01	40 0 0	1,680 0 0	0 10 0	2,100 0 0		420 0 0	25	
R 333	A	Bolt Small Hook										
R 334	A	Door Spring Plate	1,400	31-12-01	35 0 0	490 0 0	0 7 0	980 0 0		490 0 0	50	
R 335	A	Spring Shackles	1,176	31-12-01	35 0 0	1,543 10 0	0 10 0	2,450 0 0		906 10 0	37	
R 336	A	Spring Shackle Pin	2,352	31-12-01	35 0 0	1,764 0 0	0 6 0	1,764 0 0				
R 337	A	Spring Shackle Collar										
R 338	A	Axle Guard Bolts, Nut	2,744	31-12-01	35 10 0	980 0 0	0 4 0	1,372 0 0		392 0 0	28	
R 339	B	Door Bar Handle										
R 340	B	Hasp for above										
R 341	B	Cleats	1,344	31-12-01	40 12 0	537 0 0	0 4 0	537 0 0		0 0 0		
R 342	B	Washer for Spring										
R 343	B	Spring Shackles										
R 344	B	Footplate Stay										
R 345	B	Footplate Stay, including 2 Plates										
					Carried forward	20,370 0 0		20,370 0 0		0 0 0	Total Loss	

EXHIBIT SHOWING COST OF PRODUCING WAGON FITTINGS, GIVING COMPARATIVE COST WHEN FIGURES AVAILABLE—*contd.*

A.	B.	C.	FIRST BATCH										SECOND BATCH									
Reg. No.	Mark	Article.	D. Quantity.	E. Date completed.	F. Selling value if G. & engine (per 100).	G. Sales value.	H. Cost price, each.	I. Total cost.	J. Profit.	K. Loss.	L. Percentage of Loss.	M. Remarks.	N. Quantity.	O. Date completed.	P. Selling value if G. & engine (per 100).	Q. Sales value.	R. Cost price, each.	S. Total cost.	T. Profit.	U. Loss.	V. Percentage of Loss.	W. Remarks.
		Brought forward			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	Per cent.				£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	Per cent.	
A. 915	E	Vertical Lever Bracket	250	23-6-05	225 0 0	46 17 6	0 3 9	46 17 6	2 18 3	44 19 3	96		400	24-12-05	360 0 0	77 15 0	0 3 10	77 15 0		1 16 0	2	
A. 917	G	Vertical Lever Hanger	750	27-6-05	540 0 0	187 5 0	0 4 0	150 0 0		262 10 0	58											
A. 918	I	Steel Block Hanger Bracket	1,250	31-10-05	562 10 0	1,041 13 9	1 13 4	2,083 6 8		1,041 13 9	50											
A. 919	K	Brake Block Hanger	1,000	31-10-05	450 0 0	1,666 13 4	1 13 4	1,666 13 4		1,216 13 4	133											
A. 920	O	Brake Beam Safety Hanger	500	31-10-05	180 0 0	937 0 0	1 17 6	1,171 17 6		991 4 0	85		1,000	24-12-05	360 0 0	1,250 0 0	1 10 0	1,875 0 0		1,515 0 0	80	
A. 921	Q	Short Pull Rod	250	31-10-05	225 0 0	1,250 0 0	5 0 0	1,250 0 0		1,025 0 0	82											
A. 922	S	Vertical Lever Stud		See Pattern Lever	A. 915 Sheet 1																	
A. 923	S	Steel Brake Lever Clutches Pin and Washer	500	31-10-05	90 10 0	390 10 0	0 15 7	390 8 9		299 18 9	77											
A. 924	U	Pull Rod	250	4-11-05	225 0 0	1,104 1 6	8 16 3	1,104 1 6		879 1 6	80		400	17-2-06	360 0 0	1,771 12 6	8 17 0	1,771 12 6		1,411 12 6	80	
A. 925	W	Connecting Rod	250	31-10-05	1,111 10 0	1,250 0 0	5 0 0	1,250 0 0		138 10 0	11		400	17-2-06	1,777 15 0	1,968 15 0	4 18 0	1,968 15 0		191 0 0	9	
A. 926	Y	Tank Pipe Clip	500	7-11-05	90 0 0	375 0 0	0 15 0	375 0 0		285 0 0	76		1,000	31-10-05	90 0 0	375 0 0	0 7 6	375 0 0		285 0 0	76	
A. 927	2	Pull Rod Pin	1,000	24-6-05	90 0 0	900 0 0	0 18 0	900 0 0		810 0 0	90											
A. 928	3	Brake Block Hanger Bolts																				
		Bolts for above	1,000	24-6-05	90 0 0	900 0 0	0 18 0	1,125 0 0		1,027 0 0	91											
		Split Pin for ditto																				
A. 929	7	Vertical Brake Lever Hanger Bolt																				
		Bolts for above	500	24-6-05	90 0 0	90 0 0	0 3 6	90 0 0		72 0 0	80		200	17-2-06	36 0 0	90 0 0	0 9 0	90 0 0		72 0 0	80	
		Split Pin for ditto																				
		Washer for above																				
A. 930	9	Vertical Brake Lever Hanger Bolt																				
		Bolts for above	500	24-6-05	90 0 0	90 0 0	0 3 6	90 0 0		72 0 0	80		200	17-2-06	36 0 0	90 0 0	0 9 0	90 0 0		72 0 0	80	
		Split Pin for ditto																				
		Washer for above																				
A. 931	11	Cylinder Hanger, 4 Bolt and Pattern	250	31-10-05	225 0 0	250 0 0	1 0 0	250 0 0		25 0 0	10		200	17-2-06	360 0 0	500 0 0	2 10 0	500 0 0		140 0 0	28	
A. 932	13	Pull Rod Adjusting pin	750	27-6-05	90 0 0	900 0 0	0 18 0	1,350 0 0		450 0 0	33		1,000	24-6-05	90 0 0	900 0 0	0 18 0	1,350 0 0		450 0 0	33	
		Washer for above																				
		Cotter for above	500	27-6-05	17 0 0	17 0 0	0 0 4	75 0 0		58 0 0	77		500	24-6-05	17 0 0	17 0 0	0 0 4	200 0 0		183 0 0	91	
A. 933	15	Vertical Lever Bracket Pin	500	27-6-05	75 0 0	100 0 0	0 4 0	200 0 0		125 0 0	62		500	24-6-05	75 0 0	100 0 0	0 4 0	200 0 0		125 0 0	62	
		Totals	—	—	5,591 0 0	13,035 0 0	—	15,933 13 6	2 18 3	3,101 13 6	19.72	per cent.	—	—	4,709 15 0	10,468 0 0	—	12,844 0 0	—	2,375 0 0	18.49	per cent.

Exhibit No. 2-A.

COMPARATIVE COST OF PRODUCTION.

Total 1st Batch.

	Rs.	A.	P.
Cost price	1,39,553	12	6
Sales price	67,835	7	3
Loss	71,718	5	3

Percentum of Loss 105·72.

2nd Batch.

	Rs.	A.	P.
Cost price	67,842	0	0
Sales price	41,676	11	0
Loss	26,165	5	0

Percentum of Loss 62·78.

1st Batch.

(Same Items as 2nd Batch).

	Rs.	A.	P.
Cost price	42,810	7	6
Sales price	18,014	6	3
Loss	24,796	1	3

Percentum of Loss 127·64.

Exhibit No. 3.

Exhibit showing analysis of sales from 1st January to June 30th, 1926.

ABSTRACT OF SALES—JANUARY TO JUNE 1926.

	Rs.	A.	P.	Additional duty.	Rs.	A.	P.
Machinery	2,76,629	0	0	12½%	34,578	10	0
Component Parts	1,85,462	12	9	12½%	23,182	13	6
Transmission	1,16,694	0	6	12½%	14,586	12	0
Sundries	1,72,055	1	6	12½%	21,506	14	3
Railway Material	1,24,425	10	0	15 %	18,663	13	6
Special Sales	14,728	5	3	*nil*	.....		
Power Sales	31,608	10	0	*nil*	.....		
TOTAL	9,21,603	8	0		1,12,518	15	3

Exhibit No. 4.

Statement of Forge Exhibit from January to June 1926.

—	January.	February.	March.	April.	May.	June.	Total.
European Staff—							
Salaries	3,575	1,100	1,100	1,400	1,250	1,250	9,675
Expenses	354	428	494	638	466	841	3,221
Non-productive Labour	2,705	3,168	3,069	2,760	2,347	2,048	16,097
Expense Tools	1,069	47	34	7	100	81	1,338
Oiling and Belting	444	396	807	713	392	259	3,011
Sundry Supplies	527	646	521	713	510	966	3,883
Fuel for Shop	4,466	2,928	3,272	2,700	2,622	1,968	17,956
Lamps and Holders	...	2	...	...	8	66	76
Power, Light and Steam	2,163	2,805	2,455	2,416	2,990	2,949	15,778
Indian Housing	154	111	139	131	129	209	873
Repairs—							
Tools	1,365	1,315	2,739	3,391	2,030	2,513	13,353
Furniture and Fixture	...	29	22	64	28	12	155
Furnace and Ovens	153	177	63	1,150	96	731	2,370
Carried over	16,975	13,152	14,715	16,083	12,968	13,893	87,786

——	January.	February.	March.	April.	May.	June.	TOTAL.
Brought forward .	16,975	13,152	14,715	16,083	12,968	13,893	87,786
Repairs—*contd.*							
Machinery	3,540	1,623	2,080	1,581	2,648	2,732	14,204
Shop, Electric Equipment	...	...	17	...	3	10	30
,, Equipment Mechanical . .	...	...	...	...	6	579	585
Patterns	...	13	...	117	52	96	278
Buildings	...	...	28		29	3	60
Launches and Boats	113	84	156	167	138	239	897
App. G. E. Section	234	382	247	216	215	235	1,529
,, Y. & G ,, ...	836	512	628	575	531	805	3,887
,, Office	2,205	2,345	2,360	2,390	2,290	2,747	14,337
,, T. S. Section	164	227	216	221	257	191	1,276
,, E. X. ,, ...	208	188	190	202	245	144	1,177
Depreciation on Plant and Machinery .	2,560	2,560	2,560	2,560	2,560	2,560	15,360
,, on Buildings	1,000	1,000	1,000	1,000	1,000	1,000	6,000
TOTAL .	27,835	22,086	24,197	25,112	22,942	25,234	1,47,406

Investment :—

Plant and Machinery . 3,07,000 @ 10% per annum = 2,560 depen. per month.

Buildings . . . 2,40,000 @ 5% ,, ,, = 1,000 ,, ,, ,,

Exhibit No. 4-A.

FORGE EQUIPMENT AND OVERHEAD LEVY.

		Rs.	A.	P.
32	Fires working with hammers at Rs. 1-12 per fire per hour . .	56	0	0
1	Fire working with Crank Bender at Rs. 3-12 per fire per hour .	3	12	0
1	Fire with small Ryder Hammer at Rs. 1-12 per fire per hour .	1	12	0
1	Fire with large Ryder Hammer at Rs. 1-12 per fire per hour .	1	12	0
1	Fire with Hot Saw at Rs. 1-12 per fire per hour	1	12	0
1	Furnace with one Ton Steam Hammer at Rs. 5 per fire per hour	5	0	0
	TOTAL .	70	0	0

Drop forging.

		Rs.	A.	P.
1	15 cwt. Drop Hammer and Furnace at Rs. 11 per hour . .	11	0	0
1	20 cwt. Drop Hammer and Furnace at Rs. 13 per hour . .	13	0	0
	TOTAL .	24	0	0

Overhead charged—January to June 1926.

	Rs.	A.	P.
Smithy worked 1,409 hours at Rs. 70 per hour . . .	98,630	0	0
Drop stamping worked 2,073 hours at Rs. 24 per hour . .	49,752	0	0
TOTAL .	1,48,382	0	0
Actual Expense .	1,47,406	0	0
Overcharge .	976	0	0

Exhibit 5.

Item in Tariff Schedule II.	Names of Articles.	Duty.
57—42	Arms, Ammunition and Military Stores . .	30 per cent.
67—142	Coal Tubs, Tipping Wagons and like conveyances .	25 „
67—87	Tramcars, Carriages, Carts, wheel barrows and other sorts of conveyances	15 „
68—127	Motor Cars, Motor Cycles, etc.	30 „
73—90	Hardware, Ironmongery & Tools	15 „
89—96	Machinery and Component parts thereof—manual or animal labour	15 „
91—150	Fabricated Angles and Tees	25 „
91—151	Bar and rod steel, etc.	Rs. 40
91—152	Switches and Crossings and Spikes and Tiebars . .	25 per cent.
91—153	Fabricated structures of buildings, bridges, tanks, well curbs, trestles, towers	25 „
94—154	Tinplates, etc.	...
92—145	Nails—wire or french	Rs. 3
92—146	Pipes or Tubes, rivetted or built up	25 per cent.
92—97	Wire netting	15 „
149	All other kinds of wire	Rs. 60
93—97	Cans or Drums	15 per cent.
98—98	All sorts of metal manufactures not otherwise specified	15 „
114—103	Building and Engineering Materials	15 „

Exhibit 5-A.

Item in Tariff Schedule II.	Names of Articles.	Duty.
87—51	Machinery and Transmission Gear	2½ per cent.
88—51-A	Component parts of machinery	2½ „
101—63	Railway materials	10 „
102—63-A	Component parts of Railway material . . .	10 „

ANNEXURE 1.

Comparative Tariffs for wagon fittings.

Article—400—Brake Beam Safety Hangers—for 100 wagons.

Basis—Steel at Rs. 40 per ton specific tariff.

Raw material.

	Duty paid. Rs. A. P.
Cwt. 26-2-16 Bar Steel at Rs. 40 per ton . .	53 4 6
25 per cent wastage	13 5 2
TOTAL .	66 9 8

Finished Article (Imported).

	Rs. A. P.
10 per cent. duty on Rs. 389-6-0 (c.i.f. value) . .	38 15 0
Excess duty paid on Raw material . . .	27 10 8

equal to 7·10 per cent. excess on raw material.

Basis—Steel at 10 per cent. duty ad valorem.

Raw material.

	Duty paid. Rs. A. P.
Cwt. 26-2-16 Bar Steel at Rs. 6 per cwt. c.i.f. .	159 13 9
25 per cent. wastage	39 15 5
TOTAL .	199 13 2
Duty at 10 per cent. on Rs. 199-13-2 . . .	19 15 9

Finished Article (Imported).

	Rs. A. P.
10 per cent. duty on Rs. 389-6-0 (c.i.f. value) .	38 15 0
Excess duty paid on finished article . . .	18 15 3

equal to 4·87 per cent. excess on finished article.

NOTE.—The percentages given above are calculated on c.i.f. value of the finished article; where raw material is in excess we are at a disadvantage, and where finished articles are in excess we are at an advantage.

Comparative Tariffs for wagon fittings.

Article—200—Swing Door Bolts—for 100 wagons.

Basis—Steel at Rs. 40 per ton specific tariff.

Raw material.

	Duty paid. Rs. A. P.
Cwt. 16-0-8 Bar Steel at Rs. 40 per ton . .	32 2 3
25 per cent. wastage	8 0 7
TOTAL .	40 2 10

Finished Article (Imported).

	Rs.	A.	P.
10 per cent. duty on Rs. 311-8-0 (c.i.f. value)	31	2	4
Excess duty paid on raw material	9	0	6

equal to 2·88 per cent. excess on raw material.

Basis—Steel at 10 per cent duty ad valorem.

Raw material.

	Duty paid. Rs.	A.	P.
Cwt. 16-0-8 Bar Steel at Rs. 6 per cwt. c.i.f.	96	6	10
25 per cent. wastage	24	1	9
TOTAL	120	8	7
Duty at 10 per cent. on Rs. 120-8-7	12	0	10

Finished Article (Imported).

	Rs.	A.	P.
10 per cent. duty on Rs. 311-8-0 (c.i.f. value)	31	2	4
Excess duty paid on finished article	19	1	6

equal to 6·13 per cent. excess on finished article.

NOTE.—The percentages given above are calculated on c.i.f. value of the finished article: where raw material is in excess we are at a disadvantage, and where finished articles are in excess we are at an advantage.

Article—400—Vertical levers—for 100 wagons.

Basis—Steel at Rs. 40 per ton specific tariff.

Raw material.

	Duty paid. Rs.	A.	P.
Cwt. 37-2-4 Bar Steel at Rs. 40 per ton	75	1	3
25 per cent. wastage	18	12	4
TOTAL	93	13	7

Finished Article (Imported).

	Rs.	A.	P.
10 per cent. duty on Rs. 856-10-0 (c.i.f. value)	85	10	7
Excess duty paid on raw material	8	3	0

equal to ·95 per cent. excess on raw material.

Basis—Steel at 10 per cent. duty ad valorem.

Raw material.

	Duty paid. Rs.	A.	P.
Cwt. 37-2-4 Bar Steel at Rs. 6 per cwt. c.i.f.	225	3	6
25 per cent. wastage	56	4	10
TOTAL	281	8	4
Duty at 10 per cent. on Rs. 281-8-4	28	2	5

Finished Article (Imported).

	Rs. A. P.
10 per cent. duty on Rs. 856-10-0 (c.i.f. value) .	85 10 7
Excess duty paid on finished article . . .	57 . 8 2

equal to 6·71 per cent. excess on finished article.

NOTE.—The percentages given above are calculated on c.i.f. value of the finished article; where raw material is in excess we are at a disadvantage, and where finished articles are in excess we are at an advantage.

ANNEXURE 2.

Comparative statement shewing progress in reduction of costs.

Article—Flap Door Hinges—Selling price Rs. 2-6-6 each.

——	Cost to Manufacture.	Loss on Selling Price.
	Rs. A. P.	
1st Batch made by us . . .	9 1 9 each.	278 per cent.
2nd Do. do . . .	5 2 7 „	114 „

Article—Swing Door Feet for Hinge—Selling price Rs. 1-3-6 each.

——	Cost to Manufacture.	Loss on Selling price.
	Rs. A. P.	
1st Batch made by us . . .	3 13 5 each.	214 per cent.
2nd Do do . . .	2 0 0 „	63 „

Article—Train Pipe Clip—Selling price Re. 0-5-7 each.

——	Cost to Manufacture.	Loss on Selling price.
	Rs. A. P.	
1st Batch made by us . . .	0 11 9 each.	109 per cent.
2nd Do do . . .	0 6 4 „	13 „

ANNEXURE 3.

Comparative statement of cost of wagon fittings shewing percentage of material to total cost.

Article—Flap Door Hinges.

——	Total cost.	Material.	Labour and all charges.
(*a*) Present Cost . . .	Rs. 5 2 7 100 per cent.	Rs. 0 14 0 17 per cent.	Rs. 4 4 7 83 per cent.
(*b*) Cost 5 years hence . .	Rs. 2 6 6 100 per cent.	Rs. 0 14 0 37 per cent.	Rs. 1 8 6 63 per cent.

Article—Swing Door Feet for Hinges.

——	Total cost.	Material.	Labour and all charges.
(*a*) Present Cost . . .	Rs. 2 0 0 100 per cent.	Rs. 0 9 0 28 per cent.	Rs. 1 7 0 72 per cent.
(*b*) Cost 5 years hence . .	Rs. 1 3 6 100 per cent.	Rs. 0 9 0 46 per cent.	Rs. 0 10 6 54 per cent.

Article—Spindles for Draw Bar Springs.

——	Total Cost.	Material.	Labour and all charges.
(*a*) Present Cost . . .	Rs. 6 11 8 100 per cent.	Rs. 1 14 9 29 per cent.	Rs. 4 12 11 71 per cent.
(*b*) Cost 5 years hence . .	Rs. 3 8 0 100 per cent.	Rs. 1 14 9 55 per cent.	Rs. 1 9 3 45 per cent.

NOTE—Above figures do not include any profit.

ANGUS ENGINEERING WORKS.

B.—ORAL.

Evidence of Mr. ANDREW STEWART and Mr. G. B. SYMONS recorded at Calcutta on the 14th July 1926.

The nature of the works.

President.—We are very much obliged to you, gentlemen, for having sent us this revised statement, but we received it only a few minutes ago and obviously we cannot make any use of it at this stage. If, however, any questions arise after we have studied the statement we shall let you know. Is this a Limited Liability Company?

Mr. Stewart.—The Angus Engineering Works belong to the Angus Company, Limited. The Angus Jute Works and the Angus Engineering Works form the Angus Company, Limited.

President.—You make jute machinery, for instance. What else do you do?

Mr. Stewart.—General engineering, Signal forgings, Interlocking forgings, wagons forgings, transmission gear, castings up to 25 tons and so on.

President.—Do you go in for steel castings?

Mr. Stewart.—No, our castings are cast iron castings.

President.—Where is this Company registered?

Mr. Symons.—In India.

President.—Is it rupee capital?

Mr. Symons.—Yes.

President.—How long ago was the Company incorporated?

Mr. Symons.—In 1912.

President.—As far as I can remember in our first enquiry in 1923-24 you did not appear before us in this connection?

Mr. Symons.—At that time we were only thinking of starting wagon forgings; we were concentrating on jute machinery and textile machinery having in our mind always the idea of going in for wagon forgings.

Dr. Matthai.—When exactly did you start making wagon forgings?

Mr. Symons.—In 1923 in a small way. The first order we took for Jessops was early in 1924. Early in 1925 we went to Delhi in connection with the Peninsular Locomotive business. That was our first big order.

Mr. Mather.—Really your manufacture of wagon forgings had to wait for the development of wagon manufacture in India?

Mr. Stewart.—Yes.

President.—The list you give us is for wagon forgings. Do you intend to go in for forgings for locomotives?

Mr. Stewart.—Yes.

President.—But you have not sent us any list for those?

Mr. Stewart.—No. We are just waiting for developments. We have had one order for locomotive forgings but that was really a replacement order.

President.—Who are the people who take your forgings?

Mr. Symons.—The Peninsular Locomotive Company, Messrs. Jessop and Company, Messrs. Burn and Company, the North Western Railway, Assam-Bengal Railway, Madras and Southern Mahratta Railway and the Bengal Nagpur Railway.

Dr. Matthai.—Is it a permanent line you are going in for? Supposing there was a boom in jute you won't scrap these railway forgings and go back to jute alone?

Mr. Stewart.—No. In textile machinery there is only a very small amount of forgings.

Use of Indian steel.

President.—Can most of these forgings be made out of Indian steel?

Mr. Symons.—Except the high tensile steel all can be made out of Indian steel.

President.—Do you make them from Indian steel?

Mr. Stewart.—We don't say that we make them all from Indian steel at the moment.

President.—If you make your forgings out of imported steel your case is not as strong as it might be if you used Indian steel. I want to know whether you could use Indian steel for most of these forgings?

Mr. Stewart.—Yes. In fact we would like to use Indian steel for everything. It would suit us better than to have it imported.

Dr. Matthai.—How much did you actually buy from Tatas last year?

Mr. Stewart.—Not more than 5 per cent. It is all a question of delivery. We can get deliveries from England as we want them; they always give deliveries on promised dates. Tatas cannot do that. We very often get deliveries from England sooner than it takes Tatas to deliver their steel.

President.—That may be a temporary difficulty in this country. If they have to roll too many sections there will be delay.

Mr. Stewart.—That is so. There are so many works in Great Britain that you can always pick and choose.

President.—Do you require many sections?

Mr. Symons.—Yes, 60 sections more or less.

President.—For wagon forgings?

Mr. Symons.—Yes.

President.—In that case either you have got to wait or you must keep a large stock.

Mr. Stewart.—We do keep a large stock. We have a very big stock of steel.

Dr. Matthai.—Supposing you take a typical wagon, say, the A-1 type, you said you got 5 per cent. from Tatas. In cwts. how much would that mean per wagon?

Mr. Stewart.—7 cwts. per wagon.

President.—Are there any other forgings besides those you mention in the list which are required for wagon building?

Mr. Stewart.—Yes, but they are much heavier; we cannot tackle them.

President.—The quantity of forgings that you make per wagon is 7 cwts. What will be the total quantity that will be required?

Mr. Stewart.—It will be a couple of tons including buffer springs, spindles and so on, of which we can only supply 7 cwts.

President.—The rest will be imported?

Mr. Symons.—No. The Britannia Engineering Company can supply the drawbar hooks and screw couplings; Messrs. Burn and Company can make the scroll irons and axle guards which are too heavy for our hammers.

President.—How much of it will be made by anybody in India?

Mr. Symons.—Everything can be made here.

Dr. Matthai.—Take for example fittings made of special soft steel? Can they be made in India?

Mr. Symons.—Tatas make very good soft steel. That was accepted by the Railway Board and the Controller of Inspection, for articles specified as of Grade A iron, and they can be made here out of Tatas steel.

The Company's request.

President.—Now let us understand what your main complaint is. First of all you say that owing to the system of bounties for wagons you are at a

disadvantage compared with the foreign manufacturer of forgings because the duty that he pays on his forgings is 10 per cent.

President.—Whereas you have got to pay a total duty which is equal to about 13·6 per cent.?

Mr. Symons.—That is on selected items. Taking everything that we supply it comes to 11·04 per cent.

President.—But you also say that compared to what you were before, in 1924, you are worse off by 7·72 per cent. Is that right?

Mr. Symons.—That is correct.

President.—That is to say if the duty was 10 per cent. on all steel and 10 per cent. on all forgings, then you would have protection to the extent of 7·72 per cent. which you have lost by reason of the higher tariff on steel?

Mr. Symons.—That is so.

President.—You propose that in any case you must be put back to the position you were in before the duties were put on.

Mr. Symons.—Yes.

President.—Supposing it cannot be done?

Mr. Symons.—Then the only thing to do is to increase the tariff on the finished goods. We claim that with other industries we may have 25 per cent. All industries with steel as their principal raw material are protected to the extent of 25 per cent. We seem to be the only exception.

President.—You call this fabricated steel, don't you?

Mr. Symons.—Yes.

President.—So far as the fabricated steel industry is concerned they say even 25 per cent. is not enough for them.

Mr. Stewart.—We shall be satisfied with 25 per cent.

President.—We will take vertical levers as a typical instance of the heavy forgings that you make. How many of these do you require for each wagon?

Mr. Stewart.—Four for each wagon.

President.—It means that each weighs 14 lbs. and you want 4 of these per wagon, and the total weight you require is 50 cwts. Now, at the present day you pay Rs. 40 duty per ton on that?

Mr. Symons.—Yes.

President.—Therefore the total duty paid is Rs. 100?

Mr. Symons.—That is correct.

President.—You call your selling price as the c.i.f. price. Is that not so?

Mr. Symons.—No. From our selling price we have deducted 11 per cent.

President.—The price that you got, I take it, was the landed price.

Mr. Symons.—Yes. From our selling price we ought to deduct 11 per cent., one per cent. for landing and 10 per cent. for duty.

President.—I don't understand. You got the c.i.f. landed price *plus* duty, didn't you?

Mr. Stewart.—Yes, we got the c.i.f. price *plus* duty.

Mr. Mather.—*Plus* one per cent. for landing.

Mr. Symons.—Yes. If the selling was Rs. 100, the c.i.f. price would be Rs. 89, *i.e.*, Re. 1 for landing and Rs. 10 for duty.

President.—You say that was the sort of arrangement under which you sold.

Mr. Symons.—We were forced to meet competition from England and we had to accept the lowest prices at which English competitors could offer landed in India including duty.

Mr. Stewart.—It was 12½ per cent. below the figures we had originally quoted.

President.—Who are these people to whom you sold?

Mr. Symons.—The Peninsular Locomotive Company. We have got correspondence to substantiate what we say here. Letter, dated 11th March 1926, from Peninsular Locomotive Company covering copy of telegram from their Home Board. "Inform Angus Company if they can reduce 12½ per cent. compete with lowest possible English prices we will order 400 sets 60 items each. Hope to place further 480 sets." We subsequently sent a telegram to them. "Letter received. We accept offer 400 sets. We also want the order for the further 480 sets." Telegram, dated 19th March, from Peninsular Locomotive Company. "Angus error in reduction should be 22½ per cent. given for the whole 450 sets."

President.—What did you do?

Mr. Symons.—We didn't accept it.

President.—You took 12½ per cent.

Mr. Symons.—Yes.

President.—That is what you call the c.i.f. price.

Mr. Symons.—We call it the landed price. We have taken 11 per cent. off to get at the c.i.f. price. It might work out in that way. Rs. 240-10-0 was the actual landed price and we took 11 per cent. off that.

President.—Therefore it is Rs. 220 net.

Mr. Symons.—Thereabouts.

President.—And then for 4 sets it would be Rs. 880.

Mr. Symons.—Yes.

President.—On that basis they pay Rs. 88 against your Rs. 100.

Mr. Symons.—Yes, leaving us at a disadvantage of 12 per cent. We lose in some and gain in others.

Mr. Matthias.—You make adjustment for wastage.

Mr. Symons.—Yes. We have taken 11 per cent. off our selling price to get c.i.f. price of the finished articles, and to the weight of the finished forging we have added 25 per cent. as wastage to give weight of raw material.

President.—Let us see how you get the result, if you had to pay 10 per cent. *ad valorem* on this.

Mr. Symons.—We took British steel Rs. 6 per cwt. c.i.f. Calcutta or Rs. 120 per ton c.i.f.

President.—Is that correct?

Mr. Symons.—That is correct. That is the invoice price we have.

President.—What period are you talking of?

Mr. Symons.—1926.

President.—Was it Rs. 6 a cwt.?

Mr. Symons.—Yes.

President.—Can you give us the c.i.f. sterling price?

Mr. Symons.—£7-10-0.

Mr. Mather.—Do you refer to B grade specification?

Mr. Symons.—B grade ordinary mild steel—No. 8 specification.

President.—How much would you add by way of landing charge?

Mr. Symons.—One per cent. for landing charge.

Mr. Mather.—Which is the accurate figure, Rs. 120 or £7-10-0? They are not the same.

Mr. Symons.—Including landing charge and everything except duty it comes to about Rs. 120.

Mr. Mather.—It does actually cost Rs. 120 without duty?

Mr. Symons.—Yes.

Mr. Stewart.—We are buying in small quantities.

President.—Then the importer of the forging would be paying on this 2½ tons Rs. 30.

Mr. Symons.—Yes.

President.—And you would be paying Rs. 100.

Mr. Symons.—We would be Rs. 70 to the bad.

President.—On Rs. 880 you would be paying Rs. 70 more.

Mr. Symons.—Yes.

President.—How much does it work out to?

Mr. Symons.—8 per cent.

President.—You would get protection of 8 per cent. if there was a duty of 10 per cent.

Mr. Symons.—Yes, on a particular item.

President.—Just now that has been converted into a disadvantage of Rs. 12.

Mr. Symons.—So that we are Rs. 70 to the bad.

President.—Your advantage of Rs. 58 becomes a disadvantage of Rs. 12.

Mr. Symons.—Yes.

President.—On the whole your disadvantage comes to Rs. 70.

Mr. Symons.—Yes.

President.—Apart from the question of tariff, do you make much profit?

Mr. Symons.—May I read from the note we have submitted to-day? Exhibit No. 2—" Reference to columns G and I of the first batch manufactured will indicate that our selling price (equal to c.i.f. price *plus* duty) was only 48·6 per cent. of our cost price."

President.—I don't understand the column percentum of profit or loss. You say the total is Rs. 1,39,553. In that what do you include?

Mr. Symons.—We include the actual material used, the actual amount we pay for skilled labour, *plus* overhead—" on cost."

President.—That is to say depreciation.

Mr. Symons.—" On cost " includes depreciation.

President.—Does it include a return on capital?

Mr. Symons.—No.

President.—How do you allocate your depreciation?

Mr. Symons.—It depends on the machine we are operating. We have a fixed overhead per hour and in the case of ordinary blacksmiths operating in conjunction with steam hammers, we charge Rs. 2 per hour and so on.

President.—Your cost price is Rs. 1,39,553. How much of it is depreciation?

Mr. Symons.—" On cost " represents 55 to 60 per cent. of the total of cost. 7½ per cent. of the total cost would represent depreciation.

Dr. Matthai.—Everything above material is called " on cost."

Mr. Symons.—Yes, excepting productive labour or direct labour.

President.—This contains all your costs and depreciation and no manufacturer's profit. Is that correct?

Mr. Symons.—That is correct.

President.—7½ per cent. of your total cost price is what you allocate for depreciation.

Mr. Symons.—Thereabout.

President.—Here you have given the total cost price. What is the percentage between the raw material and the cost above materials?

Mr. Symons.—You would like to know the value of the raw material and the cost of manufacture.

President.—Divide this into two, materials and the rest.

Mr. Symons.—20 to 25 per cent. of the 1st cost is raw material.

President.—As regards this item vertical lever, 20 per cent. was for materials.

Mr. Symons.—Not necessarily on one type.

President.—We are taking the bulk. Generally speaking you say 20 per cent. represents materials and 80 per cent. as the rest.

Mr. Symons.—Yes.

President.—Of the 80 per cent. 7½ per cent. represents depreciation.

Mr. Symons.—Yes.

President.—You lost on your total turnover about Rs. 71,000.

Mr. Symons.—That is right.

President.—Not including profits.

Mr. Symons.—There was no profit.

Mr. Mather.—On that particular order.

Mr. Symons.—That doesn't refer to one particular order.

Mr. Mathias.—On that particular line of manufacture.

Mr. Symons.—Yes.

President.—You have given us 7½ per cent. for depreciation. According to your calculation how much would you add to your cost price for your profit?

Mr. Symons.—We would like a 10 per cent. return as manufacturer's profit.

Mr. Mather.—Capital must be very heavy.

Mr. Symons.—In engineering you have a very expensive plant and very small turnover. It all goes into labour.

President.—You say 10 per cent. addition to the total cost price is equivalent to a five per cent. return on your capital.

Mr. Symons.—That is about what it comes to. I don't refer to this particular line of business. This is almost a small thing. I refer to Angus Engineering Works. Taking this line of business, we would have to find out what our investment is before we can make a definite statement. If we get 10 per cent. return on everything we turn out, we would be very well satisfied.

Mr. Mather.—When did you instal the machinery?

Mr. Symons.—About 1920.

Mr. Mather.—I take it that your general opinion is that machinery and plant of your type can be bought at very nearly half the price?

Mr. Symons.—60 to 65 per cent. of the price. I don't speak of the buildings here.

President.—Do you consider that 65 per cent. of your book value of 1920 or 1921 would be your present day value?

Mr. Symons.—Not our book value in 1921, but against the prime cost.

President.—That gives us some idea as to what we are doing. What do you call the 2nd batch? Take a thing from your second batch.

Mr. Symons.—Our idea in giving you exhibit No. 2 was to show that we made appreciable progress from our first batch to second batch. In the first batch the loss was 137 per cent. whereas in the second batch it was only 62·7 per cent. It shows that we have made considerable progress.

President.—If you had done as badly as you did in the first year, your loss would have been 137 per cent.

Mr. Symons.—That is correct, whereas it is only 62 per cent. We have halved our loss straightaway.

Mr. Mather.—May I take it that if you were able to get fairly continuous orders, you would be able to reduce that loss still further?

Mr. Symons.—Not to the same extent as we have done.

Mr. Stewart.—But there would be a considerable improvement on our present costs.

President.—What I want to know is how you would be able to make up this loss by your duty being equalised. Even if you were put back in your original position where you were Rs. 58 to the good, you would not make it up.

Mr. Symons.—Take the item S. 3/1—Flap door Hinges—in exhibit No. 2. Our cost price on our first order was Rs. 9-1-9 and it was reduced to Rs. 5-2-7. It was brought about by a better method of stamping the head. The percentum of profit or loss there is based on the selling price which is stationary.

President.—Does that mean loss or profit?

Mr. Symons.—It is loss.

President.—Why don't you say the percentage of loss?

Mr. Symons.—It is safe to assume that it is all loss except in the case of one item.

Mr. Mather.—That particular example shows that the first statement of your costs is not to be taken in any way as a normal cost.

Mr. Symons.—We are not asking for protection to that extent.

Mr. Stewart.—In fact we are improving as we go along.

President.—Give us your percentage that you hope to work down to as between your materials and above materials.

Mr. Symons.—The percentage of the cost of material to the works cost will eventually be 40. We eventually hope to bring down our works cost to the sale price.

Dr. Matthai.—What do you mean by works cost—everything except manufacturer's profit?

Mr. Symons.—Yes. We estimate that our cost will come down to our selling price, leaving us no profit. 40 per cent. of the total works cost would be the cost of the material and 60 per cent. would be " on cost " and direct labour.

Mr. Mather.—On the basis of present day prices?

Mr. Symons.—Yes.

President.—We will keep these tables for our own use, but I think that it would be more convenient if you selected three or four items from each batch and gave us the figures for printing.

Mr. Symons.—Yes.

President.—In each case, please say that this is your " on cost " which includes everything except profit and that materials will form so much percentage of the total cost.

Mr. Symons.—Yes, both at the present day and eventually.

President.—Say what you are doing and what you hope to do. Take three or four typical forgings.

Mr. Symons.—Yes.

President.—You suggest that you ought to get the same duty as fabricated steel is getting under the present scheme, *i.e.*, 25 per cent. *ad valorem*.

Mr. Stewart.—Yes.

President.—It is rather difficult to put it that way because these are parts of a wagon. If we put a duty of 25 per cent. on forgings and a duty of 10 per cent. on wagons, more foreign wagons would come in built up.

Mr. Symons.—At the present time we are preferring this claim in conjunction with the wagon manufacturers.

President.—The wagon manufacturers are now getting a bounty. If we put a duty of 25 per cent. on their fittings and forgings they have got to compete against the foreign manufacturer. If the foreign manufacturer sends a

complete wagon, he will be put to a greater advantage if we give the local manufacturers a bounty as we are doing now.

Mr. Symons.—At the present time the wagon manufacturers here are getting their fittings from us. They are getting a bounty but we are getting nothing.

President.—You won't get any orders at all if we put a duty of 25 per cent. on forgings, supposing the present system of bounties continued.

Mr. Symons.—We understand that the wagon manufacturers are very much against the bounty system, and they want the same duty.

President.—Do you mean to say that there should be the same duty of 25 per cent. on wagons and on wagon fittings?

Mr. Symons.—One thing cannot be touched without the other. If you touch one and don't touch the other, the other would be at a disadvantage. With the present system of bounty, we suffer because we get nothing from it.

Mr. Stewart.—We have to compete with the foreign article. The Inspectors in India say that we ought to make a first class job in all respects, but they always squeeze us down to the lowest obtainable price in England.

Dr. Matthai.—Supposing you get the same rate on both by reducing the duty on raw materials, then the wagon manufacturers will be tempted to make more of these fittings themselves.

Mr. Symons.—If you do that, you would benefit the Angus Engineering Works to the extent of 7·72 per cent.

President.—Do you experience any competition from the Continent in forgings?

Mr. Stewart.—No, not to our knowledge.

Mr. Symons.—We don't actually know, as we don't know whether they buy from Great Britain or from the Continent.

President.—Have the wagon manufacturers ever quoted Continental price against British price?

Mr. Symons.—No.

Dr. Matthai.—What precisely is your request? In the first instance you would like to have the same tariff on both the finished product and on the raw material. It is only in the alternative that you want protection.

Mr. Symons.—Yes. We would never have come forward if the duty was 10 per cent. on both. If you give protection to one, we claim on equity protection for the other. How the steel industry has got the privilege. We claim that we may be protected in the same way as they have been. The figures given to the Board show that we also lose money as well as the Steel Industry. We have never made any profit.

President.—What is your total capacity for forgings of this kind?

Mr. Stewart.—We can make fittings for 100 wagons per month, that is with our present plant.

President.—They are just now building 3000 to 4000 wagons in this country every year. If we put a duty on all the fittings . . . . . .

Mr. Symons.—You will be helping the Peninsular Locomotive Company, the Indian Standard Wagon Company, Jessop & Co., Burn & Co. and others including ourselves.

Mr. Mather.—By raising the cost of these fittings?

Mr. Symons.—They will make the fittings themselves. If the duty is not increased, they cannot make their fittings. They are importing their fittings now and assembling.

President.—What we want to know is this. All the wagon builders in this country cannot get all their fittings here for you can supply them only for 1200 wagons. If we are to put a duty on fittings, you should be able to show that you would be able to supply a substantial demand in the country which you are not able to do now.

Mr. Stewart.—We are not prepared to put more capital into the business with the object of increasing the capacity for output so long as there is no chance of making any money.

Mr. Mather.—Is there not also the other consideration that you are not the only people who make these articles?

Mr. Symons.—Quite so. You have got to take all of them together.

President.—Are they all going to make the same kind of articles?

Mr. Symons.—Yes.

Mr. Stewart.—The only reason for our not being able to do more than we have done was that our plant was standing idle here and that fittings were being purchased from Great Britain.

Dr. Matthai.—If you are to do that, you will have to lay down additional plant.

Mr. Stewart.—It all depends on the question whether it is a paying proposition or not.

Dr. Matthai.—If it were a paying proposition, you would lay down additional plant.

Mr. Stewart.—Yes.

Mr. Symons.—You have got more profitable business in loco forgings than in wagon forgings. If there was no protection given and if we found that we could make more money on loco forgings, we could easily switch over.

Mr. Stewart.—We find that signal forgings fetch a higher price. Wagon forgings are a highly specialised industry in England at the present time.

Dr. Matthai.—On the whole how much of the material that you use goes as scrap?

Mr. Symons.—We estimate that 25 per cent. goes away as scrap for which we only get scrap value.

President.—You use up the best portion of that?

Mr. Symons.—We use up a very large proportion of that in high tensile castings. Loco cylinders are high tensile.

Dr. Matthai.—All these materials that you import come under the heading, bars, do they not?

Mr. Symons.—Yes.

President.—The total demand is said to be 5,700 wagons. That would mean that the amount of forgings would be about 2,500 tons. Would it keep all the works going? I mean Burn & Co., Jessop & Co. and everybody else making them?

Mr. Stewart.—How many finished wagons are they turning out?

President.—4,000 in the country. If all the fittings were to be manufactured of the kinds that you manufacture here, they would amount to 2,500 tons in a year. That would have to be distributed among so many makers. Would it be economical? If one firm were specialising in fittings that might be economical, but four or five different firms doing a little here and a little there, would that lead to economy?

Mr. Stewart.—I think the more competition there is, there will be greater economy and better methods. If there is monopoly for one big company they can charge anything they like, but if there are different firms manufacturing the same thing then they will try to have different and better methods, and eventually you can get cheaper and better forgings.

Dr. Matthai.—What is the sort of output that would enable you to run the business profitably?

Mr. Stewart.—About 5 tons per day. Just now we turn out about 2 tons a day. We would have to increase it to 5 tons.

Dr. Matthai.—What I want to get at is this. Supposing you are not going in for a larger plant and assuming that you make only these small forgings, if you have such and such output then you can say that you are

getting a normal return and you are doing business on an economical basis. What roughly would that be?

Mr. Stewart.—About 750 tons a year roughly. We would be able to do that with our present plant.

Mr. Mather.—That is about the maximum capacity of your plant?

President.—But if you had protection you would put up a bigger plant.

Mr. Stewart.—To manufacture all these forgings we would have to put up a two-ton hammer, but there would not be any appreciable increase in the overhead charges.

President.—How long would you take, supposing you got enough protection for the manufacture of these fittings, to extend your plant, to increase your output and bring down your cost.

Mr. Stewart.—With 25 per cent. protection we might do that in 4 or 5 years' time.

President.—If we recommend any protection we have got to see that after a certain time you would be able to do without protection. When do you think you would be able to do without protection?

Mr. Stewart.—If we continue to progress in the way we are doing, we hope to be able to do without protection in four or five years.

President.—You may assume for the sake of argument, if there is any protection of the raw material, that you would not be put to any disadvantage, but apart from that when can you do without any additional protection?

Mr. Stewart.—It is a very difficult question to answer. It all depends on the labour. I think it is a matter of not more than five years.

President.—In about five years time you would not require any additional protection?

Mr. Symons.—That is right.

President.—And then you would do without the compensating protection when the main industry does without protection?

Mr. Symons.—Yes.

Mr. Mathias.—Do you think internal competition will reduce the price of the finished article below what the price should be if the full protective duty is included?

Mr. Stewart.—I think internal competition would bring down prices a bit. But I don't think there will be any competition of that kind.

Mr. Symons.—If the manufacturing capacity is more than the demand then this may come about.

Mr. Mathias.—Do you import large quantities of forgings?

Mr. Stewart.—Yes.

Dr. Matthai.—What is the biggest forging you can make in India.

Mr. Stewart.—About 2 tons. It all depends on the sections.

President.—What is the heaviest forging you require?

Mr. Stewart.—Possibly 5 tons. It may be even 10 tons.

President.—Besides these railway forgings are you interested in any other, say, engineering material?

Mr. Stewart.—Yes, signal forgings and all forgings for railways. We now carry on considerable business in signal forgings and interlocking gear.

President.—The proposal you are making involves two things; first the duty on fittings. That means an additional bounty or an additional duty on wagons?

Mr. Stewart.—Yes. At the present day the wagon manufacturers are having the bounty but we are making the stuff for them. They keep the bounty and we get nothing. That is what is actually happening.

President.—It is a very intricate account to make up. You want this duty; the castings people want a duty. We have got to see how much addi-

tional cost it would mean to the wagon builder. We have got to add that, in case we give protection to the wagon building industry, to the duty on the wagon.

Mr. Symons.—The volume of business in railway material in the way of forgings for the past six months was about Rs. 1,24,000 and we would be benefitted to the extent of Rs. 18,663. That is the claim we prefer. That is the benefit which would accrue to us on the last six months production.

President.—You don't go in for bridge building.

Mr. Symons.—We don't touch that section.

Mr. Stewart.—We don't do any structural work.

President.—You deal in bar steel?

Mr. Symons.—Yes. Direct engineering—machining.

President.—When you supply these fittings, are they ready for use or are any machining has to be done?

Mr. Stewart.—They are ready for use.

Dr. Matthai.—When forgings are imported, is there any machining to be done?

Mr. Symons.—No. If we get no protection, however, it may pay us to evade the tariff on raw steel. We may import some of these in a semi-finished condition and do the machining here.

President.—By giving a very special shape, you call it a railway material and import it under the 10 per cent. duty instead of Rs. 40 per ton.

Mr. Symons.—Yes.

Mr. Mathias.—Do you import in that way?

Mr. Symons.—No. When we get a lot of complicated machining, we are all right.

Wagon and underframe fittings.

Dr. Matthai.—Are the fittings of an underframe the same as those for wagons or are they different?

Mr. Symons.—A-1 type and 12 C2 type wagons are practically identical. The fittings of the coaching underframes are quite different. Most of these fittings apply for A2 and C2 types of wagons.

Mr. Mather.—Are you concerned with fittings for coaching underframes?

Mr. Symons.—We are not so much concerned.

President.—As regards inspection who carries it out?

Mr. Symons.—The Controller of Inspection.

President.—He goes to the works and sees the manufacture.

Mr. Stewart.—Yes.

President.—Have you to get a certificate from him?

Mr. Stewart.—Yes.

Complaint re Tata's Steel.

President.—Have you been able to supply this material according to the stipulated time or has there been any delay?

Mr. Stewart.—The only delay is in regard to screw couplings. We lost about Rs. 14,000 on that through getting bad steel.

President.—Was it imported steel?

Mr. Stewart.—Tatas' steel.

President.—When did this happen?

Mr. Stewart.—About the end of 1924 or the beginning of 1925.

President.—Whose order was it?

Mr. Stewart.—The Peninsular Locomotive Company's order. We had an order for 1,000 screw couplings along with other fittings. They were anxious to take delivery of the screw couplings along with the other fittings. We got

steel from Tatas and commenced the manufacture, before we had time to get the analysis. When the report came we found that the steel was weak and full of carbon segregation. We stopped manufacturing immediately. I think we had about 350 screws and fittings. We were left with them. A lot of bickering went on between the Tata Iron and Steel Company, Peninsular Locomotive Company and ourselves and the Controller of Inspection. Eventually the Peninsular Locomotive Company could not wait longer and they cancelled the whole thing. We were left with all this material.

Dr. Matthai.—What is the sort of steel you require for screw couplings? Is it ordinary mild steel?

Mr. Stewart.—No, D Class.

President.—Was it not tested before you got it out?

Mr. Stewart.—They said that it had been tested.

President.—Eventually what happened between you and the Tata Iron and Steel Company?

Mr. Stewart.—Eventually we returned the steel to Tatas and got a fresh supply from them which was also just as bad. Again there was some correspondence. I understood that the Controller of Inspection went to Tatas and examined our order. We again got the same sort of material. By this time the order had been cancelled and we had turned out material worth about Rs. 14,000.

President.—It is rather an important thing. If Tatas' steel is not up to specification, something may have to be done there.

Mr. Stewart.—It is an arbitrary method of dealing. We say that if the material was not up to specifications, it should be cancelled and the whole stuff should be returned. They would not accept these conditions, although the home suppliers would accept these conditions.

Mr. Symons.—That is the reason why we don't deal with them now. They refuse to accept our conditions as regards quality.

Mr. Stewart.—The steel must be according to British standard specification and they won't accept that clause. "If not up to the specification, it is liable to rejection." That is what we have in order sheets and they refuse to accept.

President.—To what class of steel are you referring?

Mr. Stewart.—We are referring to D class steel which is used for screw couplings.

Mr. Symons.—I daresay their steel would have entered into our manufacture if we had not had this trouble with them.

President.—The safest thing for you is to get the certificate of the Metallurgical Inspector at Jamshedpur with every delivery that you get of Tatas steel.

Mr. Stewart.—We do. We go into it thoroughly.

President.—In this case did you obtain the certificate of the Metallurgical Inspector?

Mr. Stewart.—That was sent along possibly before the steel arrived and according to their certificate it was quite all right, but according to our own test it was not all right.

President.—Did you test it in your Works?

Mr. Symons.—Yes.

President.—Did you sent it also to the Test House at Alipore?

Mr. Symons.—Yes, we did.

President.—Did their test agree with yours?

Mr. Stewart.—That agreed with ours. It was rejected.

Mr. Mather.—The position appears to have been that you wanted a particularly close inspection of the material for a special purpose as you were going to use it for screw couplings. Tata's would not agree from the begin-

ning to submit to this test. When you submitted it to the closer inspection that you wanted for your purpose, you say it was not satisfactory.

Mr. Stewart.—You saw the steel.

Mr. Mather.—Yes.

Mr. Stewart.—It had bad carbon segregation. We never had any trouble with steel from home. We want a uniform steel.

President.—That was the only experience you had of that kind?

Mr. Symons.—It cost us Rs. 14,000.

Mr. Mathias.—Previous to that you used Tatas steel and always you found it satisfactory.

Mr. Symons.—Yes.

Mr. Stewart.—We have to be very particular about screw couplings. We don't want to have screw couplings breaking.

Mr. Mathias.—You had no complaints before.

Mr. Symons.—We never made any complaints.

President.—As regards the other fittings, do they require the same kind of care as regards the quality of steel?

Mr. Symons.—We deal in brake gear and we have to be sure of steel. We test the tensile strength of the steel and also the analysis.

President.—You apply both mechanical and chemical tests.

Mr. Stewart.—Yes, physical and chemical. Perhaps high tensile steel requires greater care.

President.—How much steel do you use per year of the kind that is manufactured here?

Mr. Symons.—2,000 to 2,500 tons.

Dr. Matthai.—In the whole of your engineering works?

Mr. Symons.—Yes.

President.—But if you were working to your full capacity . . . .

Mr. Stewart.—We will go as high as 5,000 tons.

Mr. Mather.—At the present moment the imported forgings come in under the tariff schedule as component parts of railway material.

Mr. Symons.—That is right.

Mr. Mather.—It is a very general heading. Are there not certain components of a wagon such for instance as the vacuum brake gear which is not made in India, and which perhaps cannot at present be made in India, in respect of which there will be no justification for raising the duty?

Mr. Symons.—The vacuum brake gear is not made here. It is a specialised trade.

Mr. Mather.—For sometime to come it is not likely to be made in India. Therefore if you are given what you have been asking for, it will be desirable to make some differentiation.

Mr. Symons.—Yes. Possibly that requires more investigation.

Mr. Mather.—You are not in a position to tell us very much about that.

Mr. Symons.—No. One of the big items of the Carriage and Wagons industry is springs. We do make springs, but we cannot make satisfactory springs.

Mr. Mather.—You do not claim that it would be reasonable to protect spring steel to the extent that would be necessary for forgings.

Mr. Symons.—No.

Dr. Matthai.—You were speaking of Grade A iron to which Tatas special soft steel is considered equivalent. Is special soft steel imported?

Mr. Symons.—No. Grade A iron is wrought iron.

Dr. Matthai.—On which the duty would be 10 per cent.

Mr. Symons.—Yes.

Dr. Matthai.—How do the prices compare?

Mr. Stewart.—It would be just about equal.

Dr. Matthai.—Including 10 per cent. in the one case and Rs. 40 in the other.

Mr. Stewart.—Yes. It is a very good material, easily forged and generally satisfactory. We get a good lot ourselves. Articles made from it are satisfactory. In fact I would use it as soon as any soft steel made in England.

Mr. Mathias.—Do you incur considerable loss on these particular railway requisites?

Mr. Symons.—Yes.

Mr. Mathias.—Why do you continue making them?

Mr. Stewart.—We make these in order to cheapen our cost of production by keeping our plant running all the time.

Mr. Mathias.—So that in order to keep the whole of your staff employed and the whole of your plant employed you go in for this line of manufacture.

Mr. Stewart.—We thought that we would be in a position to take on railway forgings and at the same time these small forgings which we have in textile machinery, could be put in between and done as well.

Mr. Mathias.—Possibly although you incur loss on this particular line, it pays you, taking the works as a whole, to continue the manufacture in order to get a larger output.

Mr. Stewart.—Under present conditions, it does not.

Mr. Symons.—But ten years hence we hope that it will be a profitable business.

Mr. Mathias.—Your works being a big one engaged in doing a lot of other things on which you make a profit, it is worth your while to incur some loss for a few years to make a profit eventually.

Mr. Stewart.—We are not in a position to finance the loss, but we are looking upon the conditions of trade now as being about the worst possible.

Mr. Symons.—We are not going blindly. We hope that wagon forgings will be a very profitable business 6 or 7 years hence. All that we ask for at the present day is to help us to cut our loss.

Spring Steel.

President.—As regards spring steel, we have got an application from the Hukumchand Electric Works. Probably you know the works. They propose to roll spring steel which they intend to make out of scrap. According to the reports that they have had of tests made at Alipore as well as at the Ordnance Factory they claim that they can make satisfactory spring steel.

Mr. Stewart.—It may be so. Quite satisfactory steel may be made in India for springs. The Ordnance Factory make very good steel.

President.—I think that the Ordnance people make steel out of imported pig iron. The Hukumchand Electric Steel Works propose to make it out of steel scrap in their electric foundry, and they have had test made. They claim that the results are satisfactory and that this steel can be used for making springs.

Mr. Stewart.—Of course you can get spring steel, but the specifications vary according to the springs. I don't know what the carbon percentage is.

President.—It is ·6.

Mr. Stewart.—That is low carbon.

President.—We have to go into that. An application has been made for the protection of spring steel. They claim that the spring steel ought to have the same duty as ordinary steel which is Rs. 40 per ton. I want to know whether you have any experience of Indian spring steel?

Mr. Stewart.—We have experience of steel made at the Ordnance factory. It requires very great care and they give it a lot of care. The quality of steel made in the Ordnance Works is quite satisfactory. Spring steel and spindle steel are one and the same. Huge quantities of spindle steel are used in the manufacture of spindles for jute mills and cotton mills. We have tried and made spindles out of spindle steel which we got from the Ordnance Factory.

Mr. Mather.—Have you been able to buy that steel at the same price as imported steel?

Mr. Stewart.—No, we have to pay nearly 50 per cent. more. We buy here only when we are in a hurry. We get satisfactory die block steel from the Hukumchand Steel Works.

Mr. Symons.—The quality of their steel castings also is quite satisfactory. As regards finish, they may not be quite as good as imported castings, but the quality is good.

7. THE INDIAN ENGINEERING ASSOCIATION.

Representation, dated the 12th June 1926.

I am directed to refer to the Tariff Board's press communiqué, dated 16th April 1926, on the subject of their further enquiry into the question of protection for the Indian steel-making industry.

2. I am to submit to you herewith, for the information of the Board, a memorandum, dated 10th June 1926 which has been prepared by the Committee do not propose to offer any oral evidence to the Board in connection for certain branches of the engineering industry. I am to add that the Committee do not propose to offer any oral evidence to the Board in connection with this statement.

Memorandum by the Indian Engineering Association with reference to the Tariff Board's press communiqué, dated 16th April 1926.

The protection granted to the Indian steel-making industry under the provisions of the Steel Industry (Protection) Act, 1924 will cease on the 31st March 1927 unless in the meantime the Act be amended to provide for its continuance. The Act lays down that, before the date mentioned, an enquiry shall be undertaken in order to determine the extent, if any, to which it is necessary to continue to protect the industry, and as to the duties and bounties which constitute such protection. This enquiry the Government of India have commissioned the Tariff Board to undertake; and in their press communiqué the Board intimate that they are prepared to receive evidence in connection with it. They request that firms and persons interested, who wish that the protection granted by the Act should be continued after the 31st March 1927, should submit representations stating:—

(*a*) The grounds on which they consider the continuance of protection necessary in respect of the articles in which they are interested;

(*b*) Whether they consider that the measure of protection now given should be increased or diminished; and

(*c*) Whether any protection which may be found necessary should be given by means of protective duties or bounties.

2. In reply to this request the Committee of the Indian Engineering Association submit the following representation in which they endeavour to explain the view taken by the engineering industry in regard to the question at issue. To begin with they would refer to their memorandum, dated 13th September 1923, which was written in connection with the Board's first enquiry, and in which they summarised the position of the Association in the following terms:—

(*a*) That if the Tariff Board find that the steel-making industry requires protection such protection should take the form of bounties rather than of import duties;

(*b*) That the engineering industries should preferably be encouraged and protected by guaranteed Government orders at competitive Indian prices rather than by import duties or bounties; but

(*c*) That if State-aid in this form cannot be given then the engineering industries should be protected by import duties, or by bounties, to precisely the same extent as the steel-making industry is protected.

3. Practical experience of the protection afforded by the Act of 1924 has confirmed these views. Indeed the members of the Association are at the present time even more strongly convinced than they were in 1923 that protective duties ought not to be imposed on a raw material such as steel; and that, if the Indian steel-making industry needs protection, this should be afforded, not by duties, but by a bounty or subsidy. It follows that they

would be strongly opposed to any increase in the existing duty of Rs. 30 per ton on raw steel. For their view is that the duty ought to be withdrawn; and that a bounty should be substituted for it if protection is still necessary. If the steel-making industry is—as they consider it to be—a national industry then the general taxpayer ought to be required to bear his share of the cost of developing it. There is no valid reason why the whole burden of this cost should fall on the consumer of steel.

4. It will be for the Tariff Board, after re-examining the financial position of the one steel-making concern in the country, to decide whether the measure of protection which is now given to it should be increased or deduced. The Committee are not in possession of such information as would enable them to express an opinion on this question. But, as they pointed out in the memorandum from which I have already quoted, it would be, in their opinion, a disaster to Indian industrial development for the Tata Works to be closed. If however, an increased measure of protection is found to be necessary it ought to be afforded by enlarging the bounty and not by enhancing the duty.

5. In their communiqué the Board specify the following articles in addition to rolled steel as being within the scope of the present enquiry:—(*a*) tinplates; (*b*) wire and wire nails; (*c*) fabricated steel; and (*d*) railway wagons and carriage under-frames. The members of this Association are not directly concerned with (*a*) and (*b*); and the Committee do not propose therefore to remark upon those two articles. But the Association is deeply interested in fabricated steel, and in the manufacture of railway wagons and carriage under-frames; and with regard to these the Committee have certain comments to offer.

6. So long as the protective duty is charged on raw steel so long will it be necessary to protect fabricated steel by a corresponding duty. A bounty would not be a satisfactory substitute for a duty in such a case. At the moment the duty on fabricated steel is not on a parity with the duty on raw steel; and if the latter is to remain at Rs. 30 per ton, then the former ought to be increased. It should also be changed from an *ad valorem* to a specific duty. The case for a specific duty was set forth by the Committee in a letter, dated 2nd February 1926, to the Government of India. They quote the letter here for the information of the Board:—

"I am directed to refer to the recommendations made by the Indian Tariff Board, in paragraphs 69, 70, 73 and 103 of their report dated 2nd September 1925, on the subject of the Customs duties to be levied on imported fabricated steel.

2. The recommendations were:—

(*a*) That the protective duty on fabricated steel of kinds other than those specified under (*b*) and (*c*) below should be increased from 25 per cent. to 32½ per cent. *ad valorem;*

(*b*) That the protective duty on such component parts of steamers, launches, and other vessels for harbour and inland navigation as are made of fabricated steel should remain at 25 per cent. *ad valorem;* and

(*c*) That the protective duties (1) tipping wagons; (2) coal tubs; and (3) switches and crossings adapted for use with rails under 30 lbs. per yard be increased from 25 per cent. to 40 per cent. *ad valorem.*"

3. The Committee of the Association understand that these recommendations will be debated by the Legislative Assembly during the current session. They feel therefore that they ought to take this opportunity of bringing prominently to the notice of the Government of India certain important considerations directly affected the recommendations. During the past few months large orders for fabricated steel work have been placed with British manufacturers. The engineering firms established in India are powerless to compete for these orders by reason of the adverse circumstances which have

arisen since the acceptance by the Legislature of the recommendation made by the Tariff Board in their report dated 26th February 1924.

4. The recommendation which was made by the Board in their report of the 26th February 1924 was that the duty on fabricated structural steel should be increased from 10 per cent. to 25 per cent. By their report of the 2nd September 1925 they proposed further to increase this duty to 32½ per cent. In August last, when this second recommendation was made, conditions were such as to justify the Board in recommending 32½ per cent. as sufficient. But these conditions have now so changed as to make the recommendation useless.

5. The Board based their calculations on an average value of Rs. 205 per ton for imported fabricated steel. On this basis the duty of 32½ per cent. would be the equivalent of Rs. 67 per ton. In other words, the cost of imported fabricated material would be increased from Rs. 205 to Rs. 272, as compared with Rs. 275 the cost of the locally fabricated steel. But, by reason of the continual fall in the price of steel, and by reason of the specific duty of Rs. 30 per ton on unfabricated steel, the proposed duty of 32½ per cent. is not now the equivalent of Rs. 67; and, so long as the price of steel continues to decline, the sum represented by the 32½ per cent. must of necessity continue to diminish.

6. The following tabular statement shows clearly how the Tariff Board arrived at their proposed duty of 25 per cent. in February 1924; how they arrived at their figure of 32½ per cent. in September 1925; and it also shows what the position is now :—

	February 1924.	September 1925.	January 1926.
Landed cost of material per ton excluding duty.	Rs. 145 per ton.	114	100
Exchanges	1s. 4d.	1s. 6d.	1s. 6d.
Fabricated British cost per ton—			
Material *plus* 10 per cent. wastage.	160	125	110
Conversion	90	80	80
TOTAL .	250	205	190
Fabricated Local cost per ton—			
Material *plus* 10 per cent. wastage.	160	125	110
Duty *plus* 10 per cent. wastage.	33	33	33
Conversion . . .	117	117	117
TOTAL .	310	275	260
Difference	Rs. 60 per ton.	Rs. 70 per ton.	Rs. 70 per ton.
Duty enacted and proposed .	25 per cent.	*32½ per cent.	†35·3 per cent.
Result	Rs. 62—8 per ton.	‡Rs. 67 per ton.	‡Rs. 67 per ton.

* Proposed by Tariff Board.
† Equivalent proposition.
‡ Duty required.

7. The statement makes it clear that a duty of 32½ per cent. is not now the equivalent of Rs. 67 per ton; and that it will require an *ad valorem* duty

of 35·3 per cent. on the present British cost to give the figure of Rs. 67. Of this amount a sum of Rs. 33 is to cover the specific duty on the raw material, *plus* wastage. As the Board explain, in paragraph 69 of their report, the substantive protection on fabricated steel that they wanted to give was Rs. 34 per ton.

8. It must be remembered that the Board's recommendation of 32½ per cent. has not been put into force. The duty which is actually being charged at the present moment is 25 per cent. on the British c.i.f. cost of fabricated steel, namely, Rs. 190 per ton. This is the equivalent of Rs. 47·5 per ton, from which of course the sum of Rs. 33, must be deducted, leaving a net advantage of Rs. 14·5 per ton as against Rs. 34 which was, as I have stated, the margin recommended by the Board in their September report.

9. It will be evident to the Government of India that Indian manufacturers are now in serious difficulties, and that, with the cost of steel falling, their position is rapidly becoming impossible. For this state of affairs the specific duty on unfabricated steel is of course largely responsible. Everything points to a further decline in the price of steel, but the specific duty will presumably remain at Rs. 30 per ton. It follows that an *ad valorem* duty on fabricated steel is no remedy for the difficulties that the Indian Engineering firms have to face. In other words, the solution which the Board proposed last September is no solution at all to-day. But had their proposal been put into operation immediately on the submission to the Government of their report a great deal of the hardship of which the firms now rightly complain would have been avoided. The Committee feel therefore that the firms have a just cause of complaint in the matter, and they would most strongly urge that action should be taken immediately. It is obvious that what is wanted is a specific duty on fabricated steel. The rate should be, on the figures quoted above, Rs. 70 per ton; but the Committee have taken the figure of Rs. 67 in their statement, as it was the amount recommended by the Board, but it is clearly insufficient at the present time."

7. The Committee have expressed the opinion that a bounty on fabricated steel would not be a satisfactory substitute for a duty on that article. They take the view that protection to manufacturing industries can be best afforded by means of import duties. But, like the Fiscal Commission, they would protect a raw material such as steel by means of bounties. The experience of the working of the bounties on railway wagons shows that this is a sound view. It is readily acknowledged by the Committee that the wagon bounty has greatly stimulated the Indian wagon building industry. Indeed, the response of the industry to the stimulus has been such as to make it reasonable to anticipate that Indian manufacturers will be able ultimately to fulfil all the requirements of the Indian railways as regards broad gauge wagons. But this anticipation will not be realised unless protection is continued; and if the need for the continuance of protection is admitted there arises the question of why it should be afforded by bounties rather than by duties. Wagon-building is one of those industries in which large scale production means economy of production; and it is also, as the Committee have just mentioned an industry which will in course of time be able to supply all the requirements of the Indian railways. It would appear therefore to be an industry eminently fitted to be protected by import duties rather than by bounties; and the Committee strongly recommend that the Tariff Board should consider the question of substituting duties for the existing bounty scheme.

8. It was foreshadowed by the Board, in paragraph 92 of their report, dated 2nd September 1925, that the question of substituting for the bounty scheme a protective duty on imported wagons would be open for consideration during the course of the enquiry which is now in progress. The Committee would urge that the question should be thoroughly investigated, as they believe that in the interests of the wagon-building industry the change ought now to be made. They do not propose to enter at length into the relative advantages and disadvantages of the two systems. But one of the

disadvantages of the bounty scheme is, as it seems to them, that no information can be obtained as to what the actual amount of the bounty on any particular wagon is. In reply to an enquiry from the Committee on this point the Railway Board have stated within the last few weeks that the average bounty per wagon for the year works out to Rs. 228-7-0; and that they are unable to give any further information. This is an unsatisfactory position which places the wagon-builders at a great disadvantage; and the Committee suggest therefore that the Tariff Board should request permission from the Government to disclose the figures. For without them it will be difficult to estimate what increase on the present import duty of 10 per cent. will be required to afford the necessary measure of protection.

9. The manufacture in India of carriage under-frames is on a much smaller scale than is the manufacture of wagons. Nevertheless the industry has responded to the stimulus of protection; and there is every reason to believe that it will continue to develop under that stimulus. So far the orders which have been placed with the Indian manufacturers have been small, and they have been given at irregular intervals. Tenders have not been called for at stated times yearly as is the practice with wagons. The industry has been handicapped to this extent, but nevertheless it has made progress. The Committee do not put forward any specific recommendation on the point whether the protection to be given to it should be a bounty on under-frames manufactured in this country, or a duty on imported under-frames. They are content to leave the decision of this point to the Board. But they want to make it clear that they are decidedly of the opinion that protection must be continued if the industry is to be firmly established. It may be considered to be really an industry collateral with that of wagon-building. In other words, the development of wagon-building capacity means also a development of under-frame building capacity, if the necessary facilities for erection are available.

Calcutta 10th June 1926.

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